

©C18 153182

MAY -2 1932

BULLETIN OF THE

TAYLOR SOCIETY

AN INTERNATIONAL SOCIETY TO PROMOTE THE SCIENCE
AND THE ART OF ADMINISTRATION AND OF MANAGEMENT



Three Papers in the Fields of
**Sales Management, Production Man-
agement and Cost Accounting**

**Discussions of the Church's Place in
Industrial Affairs and of the Need
for Scientific Management in
Public Administration**

Engineering Societies Building
29 W. Thirty-Ninth St.
New York

APRIL, 1932

VOL. XVII, NO. 2

Objects of the Taylor Society Incorporated

The objects of this Society are, through research, discussion, publication and other appropriate means:

1. To secure—for the common benefit of the community, the worker, the manager and the employer—understanding and intelligent direction of the principles of administration and management which govern organized effort for accomplishing industrial and other social purposes.

2. To secure the gradual elimination of unnecessary effort and of unduly burdensome toil in the accomplishment of the work of the world.

3. To promote the scientific study and teaching of the principles governing organized effort, and of the mechanisms of their adaptations and application under varying and changing conditions.

4. To promote general recognition of the fact that the evaluation and application of these principles and mechanisms are the mutual concern of the community, the worker, the manager and the employer.

5. To inspire in labor, manager and employer a constant adherence to the highest ethical conception of their individual and collective responsibility.

Membership

Membership in the Taylor Society may be either individual or firm. The following is a statement of membership classes. The fees and dues for members in other countries than the United States are one-half of those specified. The exception is the organized branch which is permitted to remit one-quarter of the regular fees for each of its individual or firm members. Application for membership should be made on a regular form which may be secured from the Society. New members may be elected directly to the grades marked.*

1. **Member*: An individual interested in the development of the science and the art of management as engineer, executive, operative, scientist, investigator or teacher. Minimum age 28. Initiation Fee, \$15. Annual dues including subscription to the Bulletin, \$20.

2. **Junior Member*: A younger member. A Junior Member may become a Member without payment of additional initiation fee at 28 years of age and must change to Member at 30 years. Initiation Fee, \$5. Annual dues including subscription to the Bulletin, \$10.

For any of the above grades a person engaged in educational work, state service, government service or the service of any other non-commercial enterprise of an eleemosynary nature shall pay one-half the initiation fee and one-half the annual dues of the grade to which elected.

3. **Honorary Member*: A member elected by the Board of Directors for exceptionally distinguished service in the advancement of the science and the art of management.

4. **Life Member*: Any Member who has prepaid all dues by the payment of \$500.

5. **Firm Member*: A firm or organization interested in the advancement of the science and the art of management which desires to make the service of the Society available to members of its organization. A firm member designates two representatives (who may be changed from time to time at the organization's discretion) who have all the rights and privileges of membership except the right to vote and to hold office. Annual dues, including two subscriptions to the Bulletin, \$40.

6. **Contributing Member*: Any individual, firm or organization desiring to promote the work of the Society by an annual contribution of \$100 or more. A contributing member has all the privileges of personal or firm membership, as the case may be, including one subscription to the Bulletin for each \$20 contributed.

7. **Student Associate*: A regularly enrolled student of management in any school of engineering, business administration, commerce or arts, of collegiate rank, or a graduate of such institution who has applied for membership not later than one year after graduation, elected upon recommendation of the instructor in charge of management courses. A Student Associate may become a Junior Member, without payment of initiation fee, any time after graduation and must become a Junior Member at the age of 25. Annual dues including subscription to the Bulletin, \$3.

All dues are payable in advance, either annually or in semi-annual instalments. The fiscal year is November 1 to October 31. Members elected other than at the beginning of the fiscal year are charged pro rata (quarterly) for the first year.

BULLETIN OF THE TAYLOR SOCIETY

AN INTERNATIONAL SOCIETY TO PROMOTE THE SCIENCE
AND THE ART OF ADMINISTRATION AND OF MANAGEMENT

Published by the Taylor Society Incorporated at
Engineering Societies Building
29 West Thirty-Ninth St., New York
Cable address: Taysoc

The BULLETIN OF THE TAYLOR SOCIETY is included in the
indexing of the Industrial Arts Index which is obtainable at
Public Libraries.

The reprint of extracts up to 50 per cent of the whole of any
article herein is authorized, provided the source is mentioned.
In return the Society appreciates complimentary copies of the
publications containing such reprints. Permission to reprint
more than 50 per cent must be arranged through the office of
the Society.

Copyrighted 1932, by the Taylor Society Incorporated.
Published every other month. Per year to Members \$2.50;
to others \$3.00. This issue \$75.

Entered as second-class matter, Dec. 17, 1921, at the Post Office at New York, N. Y.
under the Act of March 3, 1879.

Vol. XVII APRIL, 1932 No. 2

Contents

Comment	49
Measuring Consumer Attitudes	50
By J. David Houser	
Notes on January 27 Meeting Addresses	52
Time Study and Wage Systems	53
By A. B. Rich	
Notes on Discussion of January 27 Meet- ing Addresses	56
Standard Costs	57
By G. Charter Harrison	
Further Notes on Discussion of January 27 Meeting Addresses	62
Church Responsibility in Industrial Prob- lems	63
Introduction	
By Elliott Dunlap Smith	
Presentation and discussion by F. Ernest Johnson, James Myers, Father R. A. McGowan, Benson Y. Landis, Rabbi Sidney F. Goldstein, Arthur E. Suffern, Harold M. Davis, Henry P. Kendall, Charles Webber, J. N. Johnson, Dewitte Wyckoff and F. S. Blanchard	
Further Notes on Discussion of January 27 Meeting Addresses	70
Public Administration	
Introduction	71
By Luther Gulick	
Co-ordination in Public Administration	71
By Admiral T. T. Craven	
Discussion by King Hathaway, Hon. Seabury C. Mastick, W. H. Leffingwell, William P. Capes, Morris Llewellyn Cooke, Dr. William H. Allen, Dr. Gulick and Admiral Craven	
Notes and News of the Sections	86
Reviews	87
Books Received	92

Comment

INFORMAL conversations with some of our mem-
bers at the time of the December Meeting led to
the decision not to hold the usual May convention
this year. However, the Society did not look upon this
decision as an opportunity for leisure, and directed
equivalent energies in another direction. Two substi-
tute special meetings were planned; single-session
meetings to be held in New York near headquarters
for reasons of economy. These were to be in one
respect experimental; the meetings were to begin at
five o'clock and provide for formal papers before
dinner, intermission for a group dinner, and then
general discussion of the papers during the evening
period.

THE EXPERIMENT was on the whole success-
ful and both meetings were well attended and
stimulating. The first, at the Hotel Shelton on
January 27, was on the theme "Relieving the Present
Depression"; and the second, at the Hotel Lexington
on April 14, was on the theme "Avoidance of Future
Depressions." The stimulating character—at any rate
to one participant—of one of these discussions of vital
problems is amusingly indicated by a letter which reads
in part: "I hereby indict you for the commitment of
the unpardonable sin and the unforgivable crime of
inefficiency. You caused a program in which three
most eminent speakers . . . presented three distinct
Revolutions, each one of which should be considered
at least in a five-day session of discussion, proposal
and counter-proposal. You had the consummate nerve
to ask us poor boobs in the audience to discuss these
three gigantic proposals under a five-minute discussion
rule. That seems to me to be the most terrible crime.
. . . You proposed to control and limit production,
as must be done by some process, through the control
of investment and re-investment in business enterprise.
Yet you deliberately planned overproduction of plans
to a criminal degree and you limited the production
of criticism and discussion of these plans so as to make
it impossible to pull out of them the parts which may
be reduced to a practical working program. You have
nearly ruined my life. I got so over-stimulated by
the papers that I haven't been able to sleep since.
. . . Send me copies of the paper . . . P.S. It
was a great meeting any how!" All members as well
as said complainant may read the papers in a later
issue of the BULLETIN.

Measuring Consumer Attitudes¹

The Importance of Consumer Attitudes in Commercial Success

By J. DAVID HOUSER

President, J. David Houser & Associates, New York

I KNOW it sounds pretentious to use the expression "measuring consumer attitudes." Measurement, like everything else in the world, is comparative. In this connection I was very much interested in a conversation which I had with Dr. Person a few minutes ago. He said the Taylor Society had always maintained that if a time-study job was to be done in a mine and there was no stop watch available, an alarm clock should be used. There are, of course, certain types of jobs in which only a stop watch can be used, and in those cases the alarm clock would not do. I make no professions at all of presenting to you a method which is as yet in the stop-watch stage, nor a method which any more than approximates the accuracy of measurement possible with physical things and with the physical properties of things.

I think it is a matter of general admission that to a large extent the modern industrial commercial organization is in the hands of consumers. That is especially true in a buyers' market and the buyers' market is, statistically speaking, the mode in our civilization. It seems that it is only at unusual times, such as war or other critical periods, that the market becomes a sellers' market. The degree of adequacy with which the responsibility for filling the needs and desires of consumers is met is the degree of success of the modern commercial organization.

The biggest point to realize in that connection is that the only definitions of this responsibility, or the only elements of it, that have any significance or meaning are the consumers' own definitions. What I mean by that perhaps bald statement is simply this: that service is "satisfactory," or merchandise is "good" not as the person that sells defines "satisfactory" or "good," but as the consumer defines these terms.

That looks like a truism, does it not? The world is chock-full of truisms that somehow or other are not being used as the basis for decisions. It is true that

it is the consumers' definitions of good and bad, satisfactory and unsatisfactory, that in the long run control commercial success. Those definitions are arbitrary; they are autocratic; they are compelling; they are imperative. There is not any appeal from them; they do govern.

If the importance of consumers' attitudes is admitted, the next question looks like a simple question, and the answer looks like a simple answer. What are these attitudes? Obviously, the sensible way to find out is to ask the consumer directly what they are; but it is not quite as simple as that. If we stop there, we shall perhaps be in danger of oversimplification.

How should the consumer be asked? What should be the method of asking? Well, there is, for instance, a great deal of asking him by mail, and a great deal of money and energy is spent in doing this. But more significant than the amount of money and energy spent is the fact that many vital decisions are made upon the consumers' answers to the questions asked by mail. Right away we run across a very grave danger, and that is the danger involved in bad "sampling." There is a constant error operating in the mail-questionnaire process.

I suppose it might best be illustrated by referring to the well-known *Literary Digest* study concerning the much-mooted problem: Shall the country be wet or dry? Please, at the beginning understand me correctly: I do not say that the *Literary Digest* results were false; I merely say nobody knows yet whether they were false or true. I do not mean to say that the country is dry instead of being wet, as the *Literary Digest* showed; as a matter of fact, the country may be a great deal wetter than the *Literary Digest* study showed, or it may be dry. Nobody knows as a result of that study whether a larger percentage of the wets answered that questionnaire than of the dries. Nobody knows whether the dries are more vociferous than the wets; which of the two urges, the wet urge or the dry urge, is stronger; which of those urges will be better represented by a tendency to send in answers to mail questionnaires. So much for the direct-by-mail

¹Paper presented before a meeting of the Taylor Society on Marketing, arranged by the American Marketing Society, New York, December 3, 1931.

inquiry. That is one way in which people can be asked what they want.

Of course, if you do not get the truth, you have wasted your money; but in several cases recently I have seen a much more serious thing than the waste of money. Important decisions are made on the basis of those responses, and a great deal of effort is misdirected as a result of them. The cost of the thing is not so serious as the possibility of making tremendously important decisions or groups of decisions on fallacious evidence. One case that I remember very vividly involved the expenditure of many thousands of dollars on the basis of such evidence, and the loss of three valuable men in an organization because the mail questionnaire seemed to show that they were wrong.

The other alternative is face-to-face inquiries: Get people who can best meet the types of people from whom you want answers, and train them to ask people what they want, and what they like, etc., etc. You can do that. But there are then considerations as to the questions to be asked. You can say, as was done in one survey not long ago, "Which is more important to you, price or quality?" And, you are apt to get 95 per cent of the customers saying quality is more important than price.

At the risk of seeming dogmatic, I will say that such a result simply is not true. At least, it is not true in the ratio of 95 to 5. Such questions are "face saving"; they either lead people to claim credit or to avoid discredit by the way they answer.

"Do you properly train your pupils to take care of a gas stove?" was asked of a group of domestic-science teachers recently. Almost 90 per cent said they did. On the other hand, the question could be asked: "What are the things that you try to emphasize with your pupils as to the proper care of the gas stove?" From that you can construct a proper sort of check-list, and you can check or enumerate the things they do and get at least a rough score which will measure the activity.

Questions can be asked: "Why do you buy at this place?" or "What impels you to buy this?" or "Why do you shop here?" or "Why is your habit of so-and-so?" Even though there is not any face saving in answers to such questions, they are unreliable. If there is anything that modern psychology has demonstrated, it is that people cannot analyze why they do a thing. It is too difficult a task.

But perhaps most important is the fact that answers

to questions can vary from 20 per cent up to 60 per cent according to the phrasing. A question can be asked about a department store: "Is the service reasonably good in that store?" Here you find 60 per cent of the people say, "Yes." But if the question is, "Is the service all that one could expect?" you might get only 20 per cent to say, "Yes." It is a much more severe phrasing of the question. Which of the two questions should then be used for purposes of administration?

In order to avoid weakness inherent in a mere "head count," there should be a second dimension which can indicate the influence or significance of different answers. For problems of management, it is essential to know what difference it makes when people feel one way or the other, in making decisions as to what money and what effort to spend. If you do not have a means of showing this difference, you will be at the mercy of the particular phrasing of the question; you will not know, for instance, whether the 20 per cent or the 60 per cent represents the relative importance of "service."

There is need then for a second dimension. There is need for what is somewhat technically known as a "criterion"—some means for judging what consumers do and what effect upon action the attitudes which they represent have. Not very long ago a study was made in a certain section of the United States, and two questions were asked about gas. One was about the cost of gas and the other about the possible danger in the use of gas. The same percentage in each case—about 20 per cent—said gas cost too much, and that it was dangerous. A good deal of money was spent on that basis with an equal amount of attention to each of those two objections.

A year or two afterward another study was made, and curiously enough the same percentage cropped up: 20 per cent who thought the cost of gas was too high; another 20 per cent who thought that the use of gas was dangerous. Then the question was asked, "Customers complain about cost, but what difference does it make in gas usage?" "And what difference does this danger idea make?" The results were defined in an attempt to discover how much gas the people used who thought the cost of gas was too high, and how much gas the people used who thought the use of gas was dangerous. The endeavor was to find the relative importance of the two objections. It was discovered that the people who were complaining about the cost of gas being too high used just about as much

gas as the people who did not complain. But, the people who thought gas was dangerous used only about half as much as the people who did not think it dangerous! What it showed there was the fact that the matter of cost made little difference in gas usage, and the matter of danger made much difference.

Incidentally, there is nothing new about a "difference" technique. It is old in biological research; it is old in physiological research; it is old in psychological research; it is old in physical research. It has been used repeatedly and will doubtless always be used. Research, especially in buying attitudes, goes only half way without its use.

It can be used in regard to attitudes that people have. It can be used in regard to habits they have. It can be used in regard to beliefs they have. It can

be used in regard to misconceptions they have. It is possible, once you can identify groups, to find out how they differ on specific things.

I said at the beginning that it was axiomatic that the viewpoint of a consumer was important; that it is arbitrary; that it is autocratic; that as an organization observes it, and as it knows it, will its efforts be crowned with success. That seems axiomatic, yet there is a powerful drive that is operating against that, and that is the self-sufficiency in organizations which ranges in degree all the way from overwhelming down to practically none at all. The desire for and enjoyment of self-expression inheres in every one of us and operates against finding out what is on the other fellow's mind, regardless of the fact that only as we know that can we succeed.

Notes on January 27th Meeting Addresses

"Emergency Measures for the Relief of the Present Depression"

MR. EDWARD P. WARNER, Editor of *Aviation* and former Assistant Secretary of the Navy in Charge of Aeronautics, came out at the January 27 meeting as an advocate of a federal subsidy for production, to be used to modernize and replace outworn and uneconomical equipment and methods. He stated specifically that such a subsidy should not be used to increase present facilities.

He pointed out the superiority of such a method over charitable funds and public works as an immediate relief measure and also showed its possibilities as a stimulant to increased industrial activity and future stabilization. It could take the form either of support for the introduction of new or improved equipment or a direct assumption of part of the payroll burden of individual plants, in accordance with the nature of the product.

Any such subsidy would obviously have to be hedged about with restrictions. The terms on which it was granted would have to be very clearly defined and fairly attractive. The subsidy would have to be open, on those terms, to all who chose to take it. It could not, of course, be forced on those who did not wish it. Those who reaped benefits from it would pay the bill in the form of a special excess profits tax on any increase in net income over the pre-depression standard. Most of the corporations that took advantage of

it could repay the loan in a ten-year period, and thus create a permanent revolving fund for such subsidies.

The scheme could be set up for a three-months trial period with a board of economists and sociologists, together with representatives of the government fact-finding bodies, such as the Bureau of Labor Statistics, to guide it. An employment index which represented a tolerable condition would have to be decided upon by this group and used as a guide in apportioning the subsidy. Any change for the better would check the subsidy; any change for the worse increase it. A six-months continuance of the normal amount of employment would extinguish the subsidy. Local governments—state and municipal—could participate in the subsidy if it were deemed advisable.

Such a scheme should be more effective in checking future depressions than in relieving the present one. It has the merit, in Mr. Warner's opinion, of being immediately workable and at the same time the least drastic and the least interfering with individualism of any of the possible measures.

Otto T. Mallery of Philadelphia supported long-range planning and budgeting of public works as a relief measure. S. Park Harman, Executive Secretary of the Civic Unemployment Committee of Rochester, described that city's plan of soliciting and distributing employment as a relief measure.

Time Study and Wage Systems

From the Point of View of the Production Manager

By A. B. RICH

Division Superintendent, Dennison Manufacturing Company, Framingham, Mass.

SOME time ago I had a chance to discuss time study with the men of eight different companies located in Eastern Massachusetts and Rhode Island. I would like to quote some of the agreements of these men as justification for what I believe, and then, perhaps, to go beyond what these men all agreed upon, and cite my own personal experience and views on some aspects of this subject.

In the first place this group agreed:

That in every undertaking, standards of performance¹ are indispensable, since it is only possible precisely to measure or compare results by means of predetermined standards. Standards established on a basis of past records of performance, estimates, theoretical tables or what not, are bound to be an approximation at best. They suffer from incomplete knowledge, faulty reasoning and personal bias. Such methods are almost certain to be reflected in low or high standards of performance which, when used as the basis of wage payment, inevitably result in inequitable wages, not only between employer and employee, but between employee and employee. Adjustment of standards follows, with consequent discontent and loss of confidence.

In discussing time study they may be quoted as follows:

Time study is the name applied to determining, by careful analysis of everything that enters into an operation, how much time it should take to perform that operation.

Time study tends to replace guess work with a basis of fact sufficient to sustain mutual confidence between operators and management. It is the best-known method by which a management can (1) improve methods and conditions existing in the shop; (2) establish an equitable standard of performance which can be used as the basis of wage payment, production scheduling, accurate cost figuring, estimating cost of proposed changes in method and equipment and measuring the effectiveness of the management of a department; and thus (3) hold unit costs at a minimum to the benefit of all concerned.

Time study is a human solution of a human need. As such, it does not absolutely preclude the possibility of error. Its pre-eminence over other methods of establishing

¹By standards of performance is meant the time allowed to do a piece of work of a standard quality by an average operator using the best-known methods at a reasonably fast pace, without lost motion. This implies establishing by analysis all the facts entering into the performance of a piece of work in such a way that the possibility of error owing to the exercise of opinion or prejudice is reduced to a minimum.

standards consists in reducing the factor of error to a minimum. Even under time study errors occasionally may be made which result in establishing a standard of performance unfair to the operator or to the company. Unfairness should be eliminated wherever it exists. Therefore, when a standard set by time study does not allow the operator to make the rate agreed upon, the operation should be restudied and a new standard set.

No changes in standards should ever be made without a thorough understanding of all the facts in the case on the part of all persons affected. We insist that on every occasion of this nature, operators affected should personally, or through representatives, approve the proposed alteration.

Management should strive to reduce strenuous physical labor and hazard of employment, and to improve working conditions, to the end that a physically normal individual may be able to work without detriment to his well-being. A social responsibility for efficiency rests upon management. Therefore, the aim must be to make expended human effort count fully in output. This does not mean excessive speed, and no standard should be recognized which would make it impossible for a normal individual to pursue his occupation to a ripe old age.

The utilization of time study and the development of the right type of wage systems are tools of management which cannot be left in the hands of any but the thoroughly experienced.

The production manager's responsibility is to obtain maximum production and standard quality, not only this year, but next year and continuously thereafter, and without any friction or any form of irritation of the labor forces. It is so obvious that maximum production over any extended period cannot be obtained where there is labor trouble that it hardly seems necessary to make such a statement, but I have seen a good many cases where the use of time study and the type of wage system adopted were, unintentionally perhaps but none the less positively, a source of considerable trouble. It therefore seems best to point out that while these instruments for obtaining the maximum production should be utilized, it is highly important that the production manager should look at them and judge them from the point of view of the operators as well as from the natural point of view of the management.

It has been my experience that various types of operators have different feelings in regard to time study

or the wage system. It is unusual to find impartial or detached or critical thought in regard to these matters on the part of the operators who are immediately affected by them. In the case of young people entering industry, we find very little criticism of the structure of this kind of device for management control. There is a good deal of criticism of people, perhaps, but not much of the wage system as a system, or the utilization of time study as a means of obtaining fundamental information upon which to determine standards. It has always seemed to me that the great majority of young women going into industry consider their work temporary, as in fact, of course, a good deal of it is. They are interested in the amount of wages they can get, or a comparison of the wages of one job with another, but there is no very positive opinion in general as to the merits of piece work as compared with an hourly basis of pay. The criticism of time study, as such, when it comes, seems to come very largely from older, more experienced individuals, and less from the younger people; which is, of course, to be expected.

In the case of men who have reached a certain maturity, who have perhaps mastered a trade, or who have become competent, able, special-machine tenders in a specific industry, there is frequently a great deal of distrust and suspicion of, in the first place, the utilization of time study, and in the second place, any change from an hourly basis of pay. There are exceptions, of course, but I have listened to innumerable stories of the difficulties attendant upon the determination of standards and the installation of incentive payment plans with operators of this general standing.

I think it is quite natural for men of this character to feel this way. I sympathize with them. Here is a man who has been working for five, ten, fifteen years, or longer, who has mastered a certain process, who has reached a certain degree of skill and standing in his department, and has some measure of intelligence, ability and character. He certainly would like to feel that the management had confidence in his integrity, in his ability, and in his willingness to do the best that he can with the equipment, materials, etc., that he has to do with; and here is a man coming in to make time studies of his work, probably with the eventual purpose of setting a task which will be the basis of his pay thereafter. No matter how suave the time-study man—no matter how good a salesman he is—there is a fundamental criticism of the workman implied by this very fact. He feels it even if he does not analyze it. If he analyzed it, he could reasonably say

to himself: "The company does not believe I am doing my job; they distrust my ability or my integrity, or both, and they are taking this means of getting information, and will be holding me to certain standards which they intend to set." In a number of cases that I know of, labor-union literature has distinctly warned members against time study and "insidious" bonus plans. Now this attitude on the part of the operators has been overcome by various means—in some cases by getting one of the workmen to assist and demonstrate the possibility of other than the traditional ways of doing work; in some cases by what might be called super-salesmanship, gaining the more or less reluctant consent of operators; in other cases by the fairly frank use of force, over-riding and beating down of any opposition that might arise, although, as we have seen, the use of force in such a case has its dangers even with such simple folk as are working in the textile industries in the South.

It seems to me that there is one way of getting consent—and more than consent, interest—in the developing of new and improved standards. It has been done repeatedly, and so far as I know, without difficulty. I am strongly of the belief that the final result is an improvement over any other method of approach that I know of. It is, perhaps, less immediately effective; as far as I have been able to find out, it is more effective in the long run.

Very briefly, it consists in having a talk with the men with regard to the possibility of developing and improving the product and conditions surrounding their work, and asking them for their assistance in making a close analytical study of all the details of the work. The term "time study" is too brief and too apt to be misunderstood. What the management really wants to get is a study of the times of all the elements of the work—what causes delays and difficulties—and how serious each kind of delay or difficulty is. The question of method of wage payment, that is, an hourly or any piece-work plan, should be decided at a later date. It should not be included as part of the job of time study and the determination of standards. The question of whether men should work on piece work or on hourly work is something that they should have a voice in, but it is an entirely separate question from the primary one of determining proper standards. It has been my experience where this approach has been used, that the men have responded frankly and wholeheartedly.

I cannot say positively whether under the right form of incentive payment men will do more work than on

an hourly basis. I remember reading an article by George Babcock on the wage plan employed at the Caterpillar Tractor Company at Peoria. Mr. Babcock said he paid entirely on an hourly basis, but that he set very exact standards of what the men should do, and trained them to accomplish the task. He said at that time that this was a most satisfactory wage plan.

From my personal experience, I have seen production increased in skilled work approximately 100 per cent, simply by this method of determining standards, paying on an hourly basis and adjusting each individual's pay in accordance with his attainment as measured by accurately determined standards.

It is evident, then, that I believe the production manager's point of view on all time study and wage systems must be large enough to embrace both the theoretical and economic aspects and the human reaction of the operators themselves.

I myself have no doubt that there is a great deal of energy and intelligence which the operators can use in the interests of production if they feel that the ultimate result will be to their advantage. I have seen many cases where this same intelligence and energy have been utilized in opposition to the management, to hold down production, because the men felt that their interests demanded this attitude; and I am quite certain in my own mind that the manager who applies time study and an incentive wage plan, regardless of his workmen's feelings or ideas, is laying a foundation for a great deal of negative, if not positive, opposition. So the program to be followed in work of this kind depends primarily on the particular kind of people who are to be affected by the time study and the wage system.

There are, of course, a great variety of situations. In many cases there is no question in the minds of the operators but that their work, equipment, etc., should be studied. Often a piece rate or some form of incentive wage is welcome. In cases where operators depend upon each other in some measure, it is perhaps wise to consider a group payment plan rather than an individual form of payment. Where there is a certain amount of suspicion and the traditions have encouraged comparatively low standards of performance—as, for instance, in many clerical jobs—it is possible that a change in standards and in the wage system may be approached gradually to better advantage than by attempting any complete turnover. For instance, it is suggested that after the job has been carefully studied and methods have been improved, as far as

seems possible at the time, time studies may be taken and temporary standards² set with a bonus for their attainment. This bonus should amount to an increase in wages, but not as much of an increase as the management expects the eventual wage to show. A time study taken while this bonus is in effect will be more effective data for the determination of a permanent rate.

There is often very little realization, on the part of management or of men, of the amount of work possible for the skilled and interested workman who has confidence that he will be amply repaid for his efforts—confidence that the company for which he works will not take advantage of his willingness to give his utmost. Often we find very considerable increases in the average production can be traced to nothing but improved conditions of work. These improvements react on the employe to increase his interest and give him positive satisfactions in place of many positive dissatisfactions that naturally resulted from difficulties that might have been prevented.

I have spoken of permanent standards. This brings me to a very important question for which, if I did not answer it now, you would be quite justified in demanding an answer later. Just how permanent are permanent standards? When piece rates are set, are they final, or should they be adjusted? If we are paying on an hourly basis, it is, of course, evident that it is much easier to make a change in standards when and if it is necessary to do so. But under a piece rate or incentive payment plan, the question is bound to come up, not once, but many times.

There is no doubt but that through gradual improvements in conditions and methods most piece rates will result in abnormal wages unless some revision of standards is made. I am not able to talk to you with any authority as to the possibility of making indiscriminate changes in standards after they have been established. My experience so far has been to the effect that until it is possible to make a modification in methods, machinery, or materials, sufficient to influence the standard time to at least 15 or 20 per cent, it is unwise to make any changes in the standard. I

²Temporary standards, i.e., rates of pay based on short observation and issued as a makeshift basis for pay until sufficient observation is possible from which to make up a permanent standard. Here, too, you have a different question. As I see it, it is certainly necessary to issue temporary standards from time to time, but great judgment and caution are necessary or there is every prospect of setting up a feeling that temporary standards are "only one more way of cutting the piece rates."

have been told that the proper way to handle a situation of this kind is to make changes immediately when every little alteration in conditions is noted. My difficulty has been that while I can note these differences, I find it very difficult to convince the operators that a 2, 3, 4 or 5 per cent variation in conditions has actually taken place, and when they do not believe that a change in conditions has been brought about, they regard any correction of a standard as a cut in piece rate. Of course, I am still talking about those departments where incentive wages are paid.

Now I do not need to discuss with you the effect of cutting piece rates. Better men than I have enlarged upon this subject until you doubtless know more than I can tell you. I do know that where there is a reasonable confidence that wages and standards will be maintained, that over a period of years we can expect, and we do obtain, remarkable increases in production and continual lowering of labor costs, with wages sufficiently high to attract the best quality of people available for employment in the field in which we operate.

Notes on Discussion of the January 27th Meeting Addresses

DR. MILDRED FAIRCHILD, Assistant Professor of Social Economy, Bryn Mawr College, urged the special study of this situation on the part of the Taylor Society group because she believes it involves so much more than the ordinary depression, in that the techniques worked out by the engineers have so drastically cut down the number of people permanently employed. She pointed to the fact that, while labor and material costs have been reduced, managerial costs have been increased, and directed the attention of the group to this field of economy.

The important thing in her opinion, however, is not costs but markets. During the past ten years markets among our farmers have been materially curtailed. The upper and middle classes and the workers have been left to buy. But in the case of the workers increases in wages, which would have increased their power to buy, from 1922 to 1929 were more than offset by increased productivity and reductions in employment. Western Europe and the Orient are not in a position to furnish markets. And we lost our chance to sell to Soviet Russia. We must depend on our own markets, and to do this we must be sure that any bond issues, credit devices, etc., really supply buying power to the wage earner and consumer.

A combination of all the suggested plans is perhaps the only way to accomplish this. Mr. Warner's plan (see p. 52) would have to carry with it a guaranty that the subsidy granted to manufacturers, builders and transportation people would get into the hands of the wage earners. An intricate organization would be

necessary to give this guaranty. Perhaps the Rochester plan combined with Mr. Warner's could do it. Organization on a large scale is necessary unless some invention should come along to start things going.

Dr. Fairchild suggested that the Taylor Society take the lead in working out such an organization.

IMAURICE WORMSER, Professor of Law, Fordham University, and author of "Frankenstein, Incorporated," advocates a federal bond issue of not less than \$5,000,000,000 to feed starving men and women. This can be done through the employment of the men now out of work on public improvements of one sort or another. School construction, road improvement, the elimination of all railroad grade crossings, necessary public buildings, Mississippi flood control, reforestation, the improvement of river and lake navigation, slum clearance, the construction of overflow reservoirs for use in times of water famine, the improvement of sewage disposal, and above all else, the building and maintenance of huge parks and recreation centers should be undertaken. Stuart Chase has pointed out that "the blueprints for the useful expenditure of huge sums are already in the files of the federal engineers, and work may be started any day without waste or lost motion."

If some measure is not immediately taken, there will be serious consequences for the next generation in the effects of malnutrition, and none of us can disown responsibility.

Standard Costs¹

As an Element of Managerial Technique

By G. CHARTER HARRISON
Consultant in Cost Accounting, Chicago

OVER thirty years ago in the City of London, England, then regarded as the accounting center of the world, I was an innocent party to one of those peculiar agreements known as "Articles of Apprenticeship." Under this agreement my parents undertook to pay a Chartered Accountant the sum of fifteen hundred dollars out of which sum during my five years of service I was to receive as total salary one thousand dollars. In other words, my parents gave this gentleman five hundred dollars and a loan of a thousand, and I, five years of my time, in return for which I was to receive a certain alleged benefit. What was this supposed benefit? To quote from the wording of the articles, in return for cash in hand and faithful service said Chartered Accountant undertook to instruct me in what was grandiloquently described as "the science and art of accounting."

It took me a long time to wake up to the fact that in one important respect I was "buncoed" in that contract. As a matter of fact, it took me quite a time to get any idea of what accounting was all about. For the first few months of my five years' sentence I was employed in copying balance sheets and profit-and-loss statements longhand. Even today I feel a burning resentment when I recollect how many hours which could have been spent in worthwhile dissipation were squandered in substituting for carbon paper. I assume that my thrifty employer, knowing that he was paying me no salary whatsoever, figured out that carbon paper, no matter how cheap, could not be quite as cheap as I was.

While my parents faithfully lived up to their part of the agreement, the cash-in-hand part (the Chartered Accountant's lawyers looked after that), and I partially, as regards the faithful service, the Chartered Accountant did not live up to his agreement as regards the instruction in the "science and art of accounting." He could not live up to it; no then living accountant could have done so because, considered in its broad sense, accounting, as it was understood thirty years

ago, as it is taught in many schools today, and as it is still practiced by the great majority of public accountants, had no more science in it than medicine had in the thirteenth century or than astrology has today.

Standard costs represent the entry of the scientific idea into the realm of accounting. In its broadest and most fundamental sense "science" means the ability to foresee—to look ahead. It was Huxley, I believe, who said that "it is the business of science to predict," and this same idea was expressed by Louis Pasteur, who in addressing the French Academie de Medicine in 1874 on scientific thought and method said:

"True theories are the expression of actual facts and are characterized by being able to predict new facts, as a natural consequence of those already known."

The field of accounting today embraces the past, the present and the future. Until the advent of science in accounting, as represented by standard costs, the functions of accounting were regarded as being properly confined to the past, as expressed in the profit-and-loss statement, and the present, as reflected in the balance sheet. Standard costs are truly scientific in that they project accounting thought into the future.

There exists some confusion of thought as to exactly what standard costs are. The conception of standard costs commonly confines their scope within the four walls of the factory. This is easy to account for because the earlier standard-cost systems were directed solely and entirely to factory operations. The first published reference I have been able to find to standard costs was that made about twenty-five years ago in one of the earlier works of the late Mr. Harrington Emerson. In that book Mr. Emerson drew attention to the limitations of the then accepted methods of cost accounting and claimed that cost accounting, to be of any real service, would have to supplement actual cost data with standards. As he pointed out, a comparison of actual costs with standard or "should-be" costs was necessary for the cost system to disclose inefficiencies and excessive costs, something which the job-order or

¹Paper presented before a meeting of the Taylor Society, New York, December 3, 1931.

production-order cost systems failed most dismally to accomplish.

Before the introduction of standard costs the only important improvement which had been introduced was that of double-entry bookkeeping. There was nothing fundamental in this as it was merely a mechanical device which rendered it possible automatically to check the accuracy of postings by requiring a trial balance of the debit and credit sides of the ledger. Standard cost accounting, however, is double-entry in its broadest and most fundamental sense. It shows both sides of the ledger—on one side what was actually spent and on the other what was received in return for this expenditure in terms of standard accomplishment.

It took a long time, a very long time, for accountants to realize that Mr. Emerson in his introduction of the idea of standard costs had sounded the opening note of a revolution in accounting procedure. Some accountants have not realized it even today. In my case, however, Mr. Emerson's message fell upon responsive ears as I was having serious trouble with the old-style cost methods. At that time I was comptroller of Russell, Burdsall and Ward Bolt & Nut Company of Port Chester, New York. Its president, Mr. William L. Ward, so long well known in the politics of New York State, was continuously embarrassing me by asking questions which I could not answer regarding costs. He would say, for instance, "I haven't any doubt as to the correctness of your cost figures, Harrison, but nevertheless the fact remains that some of your costs are in excess of what our competitors are selling the goods for. Isn't there some way whereby your cost system can tell me why it is that some of our costs are obviously higher than they should be?"

When, a year or so later, I designed and installed my first standard-cost system in the numerous factories of the Boss Manufacturing Company of Kewanee, Illinois, I again ran up against the question "Why?" The first cost statements I presented to the president of that company merely compared actual costs with standard and showed excess costs in red ink. The first word the president used when he looked at those red figures was the same as William L. Ward used, namely, "Why?" It was necessary, therefore, for me to develop formulae which would answer this question and which would analyze variations from standard by "causes," which would show, for instance, to what extent an increase in cost was due to idle time, to excessive consumption of power, to an increase in the cost of producing power, to spoiled work being in

excess of standard, etc., etc. Of course, no standard-cost system can analyze variations by ultimate causes; it can only reflect proximate causes. It will show, for instance, that due to the inefficiency of Mr. John Brown on Monday morning spoiled work was excessive, but it does not come within the scope of cost analysis to carry this back to a further cause, namely, the quality of the bootleg liquor Mr. Brown drank on Saturday night or to a cause still farther back, namely, Mrs. Brown's disposition which largely accounted for Mr. Brown's urge for the consolation of liquor on that occasion. Here again standard-cost accounting is also truly scientific for, to quote again from Louis Pasteur, "in science it is a mistaken waste to endeavor to penetrate primary causes; we can only note correlations."

Considered as an element of managerial technique, what advantages have been derived from the introduction of standard costs in the factory? In my own experience I have never known a factory executive who, after operating a properly designed standard-cost system, would be willing to revert to the job-order cost plan it superseded. There have, of course, been successful standard-cost systems but the failure in such cases has usually been due to defective design of the system. It must be remembered that there are in operation many alleged standard-cost systems which their creators fondly believe to be in line with good standard-cost practice but which can really be so regarded only by an exercise of the imagination. Standard-cost accounting is deceptively simple; it involves the application of a few elementary, indeed self-evident, principles, but to apply these principles in the most effective manner to meet a given situation often calls for technical ability of high order.

Standard costs are great economizers of the time of the factory executive. Based on the principle of exceptions, they render it possible, through the "exceptions" from standard to bring cost-variation data to a focus, to give the management on a single sheet of paper a bird's-eye view of his factory considered from the standpoint of efficiency. The primary defect of the job-order cost plan was that it was necessary, since standards were not incorporated in the cost plan, to conduct prolonged investigations of individual cost records, to compare the cost of an operation on this order with its corresponding cost on a previous order, in order to determine where variations existed. Even then the basis of comparison was merely a past performance, the efficiency of which was not known.

Under the standard-cost plan inefficiencies are shown up automatically as part of the regular accounting routine. The job-order cost plan necessitated investigations to disclose whether an inefficiency existed or not, a dangerous and wasteful procedure. Considered from the standpoint of clerical costs, standard costs represented a great improvement over the job-order cost plan. With job-order costs it mattered not how efficient the factory might be; it took just as much cost accounting as did the most inefficient. But under standard costs, which deal primarily with "exceptions," the more efficient the factory, the less the "exceptions" and the less the accounting required.

It may be possible that there is some industry where the standard-cost idea cannot be successfully applied, but in my own experience I have as yet failed to find it. It is difficult, indeed, to conceive of a business which must be operated entirely without standards. And where standards can be determined a standard-cost system can be introduced. It is true that the same standard-cost technique cannot be successfully applied in different industries; for instance, the technique for a standard-cost system in a textile mill will differ radically from that suitable for a foundry or a machine-tool manufacturer. It was generally believed in the oil-refining industry that standard costs were not practicable in that highly complex business until my clients, the Atlantic Refining Company, tackled the problem with outstanding success. The vegetable canning industry is one presenting standard-cost problems entirely different from those to be met in other industries, and yet a most successful installation was made in a chain of nineteen canning factories by a company whose comptroller at the outset ridiculed the idea that it would be possible to apply standard costs successfully under the conditions existing in that industry. Speaking generally any business will benefit from introducing standard costs with the proper technique.

Does the designing of a standard-cost system come within the province of the accountant or the engineer? To design a standard-cost system successfully demands a combination of accounting knowledge and engineering viewpoint which is rarely met. In my own experience I have found it easier to teach engineers the necessary accounting technique than to wean accountants away from their preconceived ideas. The work of designing standard-cost systems has largely fallen to professional engineers because of the failure on the part of the accounting profession generally to grasp the standard-cost concept. Most of the failures of

standard-cost systems have been due to a lack of accounting training on the part of the engineers who have introduced them. A recent case came to my attention of a standard-cost plan which was thrown out bodily by a large manufacturing organization because the system crudely wrote off all differences between standard and actual costs directly to profit and loss so that the company had absolutely no information as to the actual current costs of the different products it manufactured. It is hardly to be wondered at that the company after operating the system for a few months abandoned it in disgust. The marvel is that installation of the system was ever permitted. Incidents like these are unfortunate because they result in creating an erroneous belief that standard costs are impracticable in a given industry whereas, if properly designed, they would prove of incalculable value to the management.

The best proof of the correctness of a basic idea is the possibility of successfully expanding its application. The standard-cost idea is no exception to this rule. It was inevitable that the application of the standard-cost idea should be expanded to include the selling and administrative fields as well as the factory. After all is said and done, minimum manufacturing costs are merely means to an end. The primary purpose of business is profits and carrying the standard-cost idea to its logical conclusion meant incorporating in the accounting standards for all elements entering into the profit-and-loss statement. There is, of course, no fundamental difference between a budget and a standard-cost system except that the former term is usually applied to a forecast of expenditures and income, whereas a modern standard-cost system, based upon sales quotas, standard selling and administrative costs and standard factory costs, is a highly scientific and technical procedure.

It is understandable that executives who have once operated under a complete standard-cost plan wonder how they were ever able to direct the affairs of their businesses without it. The chief executive of a business with such a system has as definite an objective before him as the man operating under a task and bonus plan on a machine. The objective of such an executive is a standard profit which in itself represents the merging of ten or a hundred thousand minor or subsidiary objectives—sales quotas for a hundred salesmen, standards for salesmen's salaries and expenses, standard expenses for branch offices, advertising appropriations, standard factory costs, etc.

Information showing how actual profits compare with standard, however, is of limited value unless provision is made for analyzing this variation from standard by "causes." Here the same procedure is followed as that already described in connection with the analysis of variations from standard manufacturing costs. Profit-variation formulae are used for this purpose. The profit-variation sheet is the chief executive's key statement. It shows the actual net profits for the month and the standard profit for the month. The difference between the two, if an excess of actual over standard, is shown in black; a decrease is shown in red. The analysis of the net increase or decrease shows that either may be due to the following "causes": sales volume, variety of goods sold, selling prices, selling and administrative expenses and factory costs.

Supporting the profit-variation sheet are subsidiary schedules. The increase or decrease from standard profit, due to variations from the standard sales volume, for instance, is further analyzed by territories, salesmen and lines of product.

A business operating a standard-cost system along the lines described is certainly organized for profit. Every key man in the organization, in the sales, manufacturing and administrative departments, has his individual objective which represents one component of the ultimate objective of the business, standard profits. A few minutes' study of the profit-variation sheet and its supporting schedules enables the chief executive to place his finger on conditions in his business and organization adversely affecting profits. If a branch sales office, or a salesman, is slipping, red figures on the subsidiary statements clearly tell the story; if selling prices have been cut to secure increased volume the black figure resulting from greater volume can be compared with the red figure recording the loss through the reduction in prices. If an extra clerk has been added to the shipping-department force the fact is recorded in red; if a larger than standard variety of low-profit goods has been sold red figures again record the effect of this on the company's profits.

In the most recent development of standard costs, profit objectives are automatically adjusted to conform to changes in general business conditions. In one business, for instance, a study of its past sales showed that over a ten-year period fluctuations in its sales directly followed fluctuations in the tonnage of steel ingots produced in the U. S. A. The standard sales figure for that company is adjusted monthly to conform to the current index of steel ingot production

and the standard profit figure is modified to reflect the revised sales figure. The standard-profit figure is then a correct index of the profits which should be earned under current conditions. When a standard-cost system is carried to this final development it can be considered definitely scientific.

There is a limit, however, to the results which can be secured from the setting up of standards and the recording of the efficiency of the individual in relation to these standards. Probably the most important development of standard costs has been their use as a basis for incentive payments to key men in return for super-accomplishment.

Until the development of scientific standard-cost accounting, which rendered it possible to analyze accurately increases and decreases in costs due to conditions outside the control of individuals and to variations in efficiency, it was not possible to formulate key-man incentive plans which were fair either to the company or to bonus participants. When production increased because of larger sales volume, costs were automatically reduced and the company paid out bonuses which were not earned. Conversely, when production fell off the key men were penalized for cost increases entirely beyond their control. Standard-cost accounting rendered key-man bonus plans feasible and immensely profitable. As an illustration I have before me a statement showing reductions in costs of approximately \$110,000 in a medium-sized factory in a single year. This was secured mainly through the operation of a key-man bonus plan which provided for sharing a percentage of the savings realized with the men responsible for them. In that factory every key man participates in the savings made—the superintendent, foremen, assistant foremen, inspectors, toolmen, stock supervisors, the traffic manager, the purchasing agent and the cost accountant. Standard-cost accounting in furnishing an accurate and equitable foundation for key-man incentive plans is solving the greatest of industrial problems, namely, the need to stimulate every key man in a business to put forth the greatest possible amount of intelligent and co-operative effort.

Standard-cost accounting provides the correct foundation for incentives to salesmen. There is only one sound basis for a sales-incentive plan, namely, identical interests of the incentive participants and the company. In other words, the plan should be so lined up that the salesman's reward will increase as his contributions to company profits increase. Not one sales-incentive

plan in a hundred conforms to this obvious requirement. Standard-cost accounting is the key to this door to increased profit. Salesmen can favorably influence profits in three major ways; first, by increasing their total sales volume; second, by securing a large ratio of gross profits, either by selling a larger percentage of the more profitable lines or by increasing the percentage of sales in the lower-discount classes, and third, by reducing their personal selling expenses. A standard-cost system enables these three factors to be brought adequately into account in a sales-incentive plan.

This brief summary of the uses of standard costs in managerial technique would be incomplete if some reference were not made to the use of standard costs as a guide to executive action. It has been claimed that standard costs are essentially scientific in character in that sense which implies the ability to foresee the effects of a proposed course of action. It is in this connection that they are of great value.

Perhaps the simplest illustration of the use of standard costs as a guide to future action is in connection with selling costs. In these days of business depression practically all sales managers are straining every nerve to secure increased sales volume. To sell goods costs money; to increase sales generally involves an increased ratio of selling expenses to sales. At some point the law of diminishing returns begins to operate. Due to inadequate accounting, sales managers who know where this point occurs are in the great minority. We, therefore, have the extraordinary situation of sales managers who are everlastingly driving to increase sales, and spending money to this end, without knowing the value in terms of increased profits of one hundred dollars worth of increased sales.

Let me give an illustration. A small manufacturer in the Middle West is endeavoring to cover the whole country with a woefully inadequate sales force. He admits that he cannot sell intensively, but claims that his few men can secure more sales per man by calling on the important accounts than a larger force by working more accounts. Years ago he conceived the idea that the maximum cost of sales effort should be 6 per cent of sales, and he maintains this percentage. As a result of this policy his factory is operating at about 25 per cent capacity and the business is badly in the red.

An analysis of his figures, however, shows that his breaking point of sales cost is 28 per cent. That is to say that, at existing selling prices, he can spend

\$28.00 to secure \$100.00 of sales without losing money. If he can increase his sales by 20 per cent and spend 9 per cent of this increase for selling expenses to secure it he can get out of the red, as shown by the following statement:

	<i>Existing Condition</i>
Sales	\$650,000
Costs and expenses	668,000
Net loss	18,000
	<i>Revised Condition</i>
Marginal profit on 20 per cent increased sales or 28 per cent of \$130,000.....	\$ 36,400
Increased selling cost 9 per cent of \$130,000	11,700
Net profits on increased sales.....	24,700
Net loss as above.....	18,000
Revised net profit	6,700

Here is an illustration of a business which was headed for bankruptcy all because of a lack of accounting knowledge.

I have endeavored in this paper to demonstrate that standard costs represent a great constructive factor in industry, that they place in the hands of management a tool of enormous value.

Advanced thinkers on accounting have always realized that accounting has invariably trailed behind in the industrial procession. Compared with engineering, accounting is a laggard indeed. It was an engineer, not an accountant, who first conceived the idea of standard costs.

It is a strange thing, but most of the resistance to the introduction of improved accounting methods comes from the industrial accountant, who can most greatly benefit therefrom. Time and again have I seen the operating officials clamor for the benefits of standard costs while the accountant stubbornly advanced the old argument that "standard costs may be all right in other industries but they won't work in ours." There are, of course, many outstanding exceptions to this rule.

The key to the situation, in my opinion, is the education of executives to the possibilities and advantages of scientific standard costing. After all is said and done, "he who pays the piper can choose the tune." When executives demand the results to which they are entitled from their accounting departments, it is a foregone conclusion that these results will be forthcoming.

Executives as a class, however, have not realized the great possibilities of adequate accounting. They have regarded accountants as clerks and have paid them

accordingly. And they have got what they paid to get.

As soon as executives realize that business competition is going to demand as much science in accounting as in engineering and are willing to give the accountant a commensurate salary and standing, the industrial accountant's job will attract the more ambitious and

intelligent men who today prefer almost any other field. Of course, there are many businesses where the value of the accountant is fully understood and appreciated, but that is surely not the case in the great majority of business institutions that exist in the world today.

Further Notes on Discussion of January 27th Meeting Addresses

DR. WILLIAM N. LOUCKS, Assistant Professor of Economics, Wharton School of Finance and Commerce, University of Pennsylvania, confined his remarks to the use of public works as a means of stabilizing employment. They may be considered both as a means of relieving the present depression and as a stimulant to business recovery. Dr. Loucks agreed with Mr. Mallery that there has been an almost complete failure to use public works as a means of relieving this present depression. He believes also that there is little hope that they will be so used in the near future. Municipalities are broke at the present time, and constitutional requirements prevent the states from over-borrowing. And even if money were available the process of planning and starting any public works program is so cumbersome that the prospect is not hopeful. A large federal bond issue would be a possibility but the government is turning its attention to other methods of inflation.

Dr. Loucks believes, theoretically, that the proposal to use public works to stabilize employment is much sounder than Mr. Warner's proposal for subsidizing industry. The reason is that credit put into public works produces something outside the competitive market. Streets and parks and playgrounds and libraries are not offered for sale. A subsidy for industry, on the other hand, might encourage increased production in a field where manufacturers were already having difficulty in disposing of goods.

Granting the soundness of the theory, Dr. Loucks suggested a consideration of what can be done about it. He is in favor of turning effort away from the present situation and devoting ourselves to plans for the future. The formulation of an ideal policy for federal, state and municipal governments is necessary. Programs need to be planned for a much longer period than has been the case and expenditures budgeted

accordingly. There is also a great need for research studies in specific municipalities and states, preceding the making of plans in such a way that reserves for public works can be set up and held for depression periods. This will involve the setting up of administrative machinery. The reserves do not exist at the present time and will not be self-formulating. The federal government has made a good start on such plans but it is up to the state and municipal governments to do a large part of the job.

WALTER N. POLAKOV, Consulting Engineer who has recently returned from work in Russia, spoke of this crisis as the end of an era. He scorns as a remedy a subsidy to manufacturers at the same time that a "dole" to the laboring man is thought bad for his morals. He also believes that talk of public works as a remedy is a hiding away from the direct issue. The best public work would be to start up our industrial plants.

The unutilized capacity to produce and to consume at the present time is tremendous. The reason for the seeming impasse is due to the difference between the price of goods and wages. The economists and sociologists must help the engineers on this fundamental problem.

MR. JOHN NORTON JOHNSON of Reimers & Whitehill, Inc., New York, pointed out the severe mental effects of unemployment and suggested, after a classification of the able-bodied and capable according to abilities by those who can certify to the quality of their work, an organized campaign to sell these abilities to home owners and industrial managers. He advocated relief rather than "made work" for those in actual physical distress.

Church Responsibility in Industrial Problems¹

A Discussion Conference Based on Eight Cases of the Assumption of Such Responsibility
by Organized Church Bodies

Introduction

By ELLIOTT DUNLAP SMITH

Professor of Industrial Relations, Sheffield Scientific
School, Yale University, New Haven

THE PURPOSE of this conference is to bring up for discussion some of the religious problems involved in the present conduct of business. There has never been a time in the memory of most of us when business has created so many moral issues and gone so far in disturbing not only the physical and economic well-being of man but also the course of his intellectual and spiritual life.

In the middle ages, an established church was able to enforce upon business practices such as the charging of a carefully defined "just price." Even in colonial America, the local churches successfully called violators of the "just price" before them for public confession and repentance. But even in that day the cry had begun to be raised against having "merchants' doings thus overthwarted by preachers and others that cannot skill of their dealing."

During the past century the dissension among churches made difficult the subjecting of business practice to any unified expression of moral principle. Today, however, the lessening emphasis upon technical matters of faith has enabled organized religion, regardless of creed, again to present a united front in matters of social welfare. Perhaps no instance is more striking than when in 1923 united action by Protestant, Catholic and Jewish church federations forced the shortening of the twelve-hour day upon a reluctant and resisting steel industry. The existence of these permanent federations of churches with staffs investigating social aspects of business and industrial problems has again vigorously raised the issue of whether experts in the complex and difficult art of business "are to be overthwarted by preachers and others that cannot skill of their dealing."

Clearly, organized religion has no place in the tech-

nique of business dealings. Equally clearly, the great present-day influence of business and industry over men's lives at least raises the question of whether organized religion has not a right and an obligation to bring before business the human consequences of business practices and conditions.

That is the question before us. In order to get it before you concretely, and to avoid unsubstantiated generalities, the discussion will be conducted on the basis of eight recent cases which illustrate the various types of concrete industrial situation in which organized religion has taken positive action.

These cases have been selected by the Federal Council of the Churches of Christ in America, the National Catholic Welfare Conference, and the Central Conference of American Rabbis, from cases in which they jointly or separately participated. These cases will each be stated by a representative of these organizations who actively participated in the action taken. We shall thus be brought into contact with actual facts by people who can talk from direct experience.

Cases

I. The "Open-Shop" Statement—1920

F. Ernest Johnson, Director of Research,
the Federal Council of the Churches of Christ in America

This was one of the earliest cases to which the attention of church bodies was called in the post-war period and was characterized by the simplicity of the issue presented.

Soon after the end of the War a movement was organized by employers, known as the "American Plan," to force labor from the privileged position which it had occupied during the War. The crux of the matter was the use of the term "open shop." On December 26, 1920, the Administrative Committee of the Federal Council of Churches issued the following statement:

The relations between employers and workers throughout the United States are seriously affected at this moment by a campaign which is being conducted for the "open-shop" policy—the so-called "American Plan" of employment. These terms are now being frequently used to designate establishments that are definitely anti-union. Obviously, a shop of this kind is not

¹Presented before a meeting of the Taylor Society, arranged by the Federal Council of the Churches of Christ in America, the National Catholic Welfare Conference and the Central Conference of American Rabbis, New York, December 4, 1931.

an "open shop" but a "closed shop"—closed against members of labor unions.

We feel impelled to call public attention to the fact that a very widespread impression exists that the present "open-shop" campaign is inspired in many quarters by this antagonism to union labor. Many disinterested persons are convinced that an attempt is being made to destroy the organized labor movement. Any such attempt must be viewed with apprehension by fair-minded people. When, for example, an applicant for work is compelled to sign a contract pledging himself against affiliation with a union; or when a union man is refused employment or discharged, merely on the ground of union membership, the employer is using coercive methods and is violating the fundamental principle of an open shop. Such action is as unfair and inimical to economic freedom and to the interest of society as is corresponding coercion exercised by labor bodies in behalf of the closed shop.

It seems incumbent upon Christian employers to scrutinize carefully any movement, however plausible, which is likely to result in denying to the workers such affiliation as will in their judgment best safeguard their interests and promote their welfare, and to precipitate disastrous industrial conflicts at a time when the country needs goodwill and co-operation between employers and employees.

This statement brought bitter denunciation upon the Federal Council and many persons of means and influence withdrew their support.

II. The Case of the Twelve-Hour Day in Steel—1923

F. Ernest Johnson

Here is a somewhat different issue—a simple moral issue but one involving a great deal of industrial management technique. A substantial change in management was involved in switching from the long to the short shift in steel.

This was one of the most dramatic incidents in the history of the Federal Council and particularly interesting as the first occasion when Protestant, Catholic and Jewish bodies united on a national issue in the industrial field.

When the Interchurch World Movement made its famous study of the steel strike of 1919, it disclosed the continued prevalence of the twelve-hour day and the seven-day week in the steel industry. A great deal of popular indignation resulted, and President Harding asked the heads of the industry to consider abolition of the long shift. A year later the Iron and Steel Institute announced that it had decided not to take any action, and defended the existing regime. Immediately, national Catholic, Protestant and Jewish bodies denounced the decision of the industry as "morally indefensible." The Federal Council of Churches published afresh the facts concerning the long day in steel, and, as a climax to the campaign, published a

letter from the president of the Colorado Fuel and Iron Company stating that the eight-hour day had been demonstrated by that company to be thoroughly feasible. The press of the country took the matter up vigorously and within about six weeks of its original announcement the Iron and Steel Institute reversed its decision, explaining that it did so out of deference to public opinion.

III. The Detroit Incident—1926

James Myers, Research Staff, Federal Council

In order to promote understanding among church people of the ideals and social aims of the labor movement, which at many points coincide with the officially adopted "Social Ideals of the Churches," the Social Service Commission of the Federal Council of Churches has for many years suggested to the churches of the city in which the American Federation of Labor has held its annual meeting that outstanding labor leaders be invited to speak in church pulpits. Controversial subjects—aside from the right to organize—are not discussed. The emphasis is laid on the humanitarian aims of the labor movement—its effects on the living standards of workers, on special regulations for women, on reducing child labor, etc. This custom has prevailed for nine years and only in Detroit in 1926 was opposition developed. The Catholic church, which never gives over its pulpit to lay people, has nevertheless held a public mass for convention delegates in each of the cities where the American Federation of Labor has met and has never got in trouble over it. This is because Catholics, at least theoretically, accept the normalcy of religious activity in industrial matters.

Detroit is an "open-shop" town and the meeting of the American Federation of Labor there was regarded as a feature of a drive for organization of the automobile industry. The Board of Commerce made open attack on the project. In consequence, the Y. M. C. A. canceled its invitation to President Green of the American Federation of Labor to speak on Sunday afternoon and several churches withdrew their requests for speakers.

Seventeen appointments for labor and church social-service representatives were carried through, however, and a mass meeting was held under the auspices of the Federal Council at which President Green spoke. The secular, liberal, religious and labor press throughout the country condemned the action of the Board of Commerce, as did the local Council of Churches.

IV. The Western Maryland Enginemen's Strike—1927

Father R. A. McGowan, National Catholic Welfare Conference

A strike of engineers and firemen on the Western Maryland Railroad occurred in October, 1925, and the three national Protestant, Catholic and Jewish bodies again undertook, at the request of local ministers' associations, to make a study of the situation that had resulted in the strike. The men heartily welcomed this move—indeed, had participated in bringing it about. The president of the road offered co-operation, but disapproved of the investigation. The reason for the intense interest of church groups was, in part, the fact that many of the men affected and their families were members of churches in cities along the line and the fellowship of the churches was very seriously interrupted by the controversy.

The report disclosed a non-co-operative and provocative policy on the part of the management, for a full explanation of which a great deal of technical discussion was necessary. The ethical issues clearly emerged, but an extended technical investigation had to be made before these issues could be made clear. Among the issues coming to light was that of the moral responsibility of stockholders for the policy of management.

Committees of local churchmen sponsored the study and participated in it in a limited way.

V. The Dairymen's Strike in the Chicago Milk Shed—1928

Benson W. Landis, Rural Department, Federal Council

Early in 1927 the Department of Research and Education of the Federal Council of Churches was invited to participate in a study of the relationships in and about Chicago between dairy farmers, milk distributors, dairy employes and the municipality itself. The project was initiated by the Commission on the Church and Industry of the Chicago Church Federation.

The situation was a good example of the rural-urban conflict which existed in many parts of the United States and in other countries. The controversy centered about the standards required of milk producers by the Health Department of Chicago and the issue of bargaining between farmers and milk distributors and between distributors and their employes. The farmers complained that the distributors were dictating prices, that the spread between the price received by the farmer and the price paid by the consumer was too great, that the milk drivers and dairy employes had too much control and compensation, that the tuberculin test of cattle was unreliable and resulted in injustice

to dairymen, and that the city acted too drastically in enforcing the test. It was a good public measure in principle but unreasonable because of the time limit placed upon it.

One of the findings of the churchmen was that tainting milk with injustice was as bad as tainting it with germs. The report recommended that a conference should be set up, composed of representatives of the city, the farmers and the distributors and their employes, to deal with prices and working relationships, and that in case of disagreement recourse should be had to arbitration. It also recommended restriction of the territory from which milk could be shipped to the city, in order to deal with the problem of over-production and the maintenance of the quality of milk. The churches and civic agencies were urged to play a constructive part in educating the disputants as to their responsibilities and in establishing measures to provide for a steady supply of pure milk.

In 1928 a strike was called which threatened the supply of milk. The arbitrator picked by the church group was finally called in and a settlement arrived at. The churches at least had demonstrated that community agencies have a real concern in such affairs, and they were in this case able to participate in procedures for the improvement of human relations.

VI. The Textile Strike in Marion, N. C.—1929

James Myers

The Industrial Secretary of the Commission on the Church and Social Service of the Federal Council of Churches went to Marion, North Carolina, where there was a strike situation in the cotton mills. The objectives of his visit were threefold: (1) to explore any possibilities of mediation; (2) to investigate suffering of the families of strikers and the adequacy of the relief and (3) to secure the facts in regard to causes of the strike for a report which might be published in Information Service for the benefit of church circles and the public.

He arrived in Marion on October 1, 1929, interviewed employers, ministers, union leaders and rank-and-file workers, discovered that there was possibility of a second walkout because of alleged breaking of agreement by the management of the Marion Manufacturing Company, where the strike had presumably been settled shortly before. He endeavored by long-distance telephone to bring about immediate efforts at mediation through a prominent business man of Asheville, who had been instrumental in settling the first strike. A walkout, however, occurred early the fol-

lowing morning and six men were shot and killed at the mill gates by deputy sheriffs. The Industrial Secretary endeavored to secure a prominent southern minister to participate in the funeral of these workers, and being unable to do so made an address at the funeral himself on the invitation of the union committee. He then continued efforts toward mediation. A preliminary meeting of union leaders and a representative of the Governor was held in his room at the hotel. He then accompanied union leaders for an interview with the Governor at Raleigh, asking investigation and further efforts toward a constructive settlement.

The Industrial Secretary returned to Marion and made a survey of actual relief needs by a large number of personal interviews with the strikers and their families. He then endeavored to form a committee of southern church people to supply relief to meet what were extreme conditions of suffering. Failing in this, the American Friends Service Committee (Quakers) were approached and, on invitation of the Federal Council of Churches, undertook relief work in Marion. The burden of raising funds fell principally upon the Federal Council. One thousand people were fed through the winter months and most of them were enabled to find work either in other mills or on farms in the spring.

The Industrial Secretary prepared from a large number of personal interviews a factual statement on the causes of the strikes in Marion and their conduct, the relief needs and the relation of the churches to the strike. This was printed on December 28, 1929, as a special issue of Information Service, which included also a section on the economic status of the cotton-textile industry prepared by Dr. Arthur E. Suffern of the staff of the Research Department of the Federal Council. It included also a joint statement on the southern-textile situation by the Commission on the Church and Social Service of the Federal Council of the Churches of Christ in America, the Social Action Department of the National Catholic Welfare Conference and the Commission on Social Justice of the Central Conference of American Rabbis. This special issue of Information Service was widely used in the churches and universities and elsewhere. A copy was sent to each of the contributors to the relief fund asking that the report be made the subject of study and discussion in the Bible classes and young people's societies of the churches, many of which had contributed either clothing or money for relief, thus

relating an educational process to the actual project of relief.

VII. The Joint Study of the Centralia Case—1929-30

Rabbi Sidney F. Goldstein,
Central Conference of American Rabbis

A study of the "Centralia Case" was made jointly by the Department of Social Action of the National Catholic Welfare Conference, the Department of Research and Education of the Federal Council of Churches, and the Social Justice Commission of the Central Conference of American Rabbis, in response to urgent requests from the Washington Conference of Congregational Churches and the Pacific Northwest Conference of the Methodist Episcopal Church.

On Armistice Day, 1919, at Centralia, Washington, a violent clash between parading ex-soldiers and members of the Industrial Workers of the World, before whose hall the parade halted, resulted in the death of four legionnaires, the wrecking of the hall and the lynching of one member of the Industrial Workers of the World. Prior events and current rumors had convinced the Industrial Workers of the World that they were warranted in preparing for violence, but the facts regarding the responsibility for actual initiative in attack are clouded. The trial which followed resulted in the conviction of seven Industrial Workers of the World of second-degree murder with sentences of from twenty-five to forty years. Accusations of injustice and uncertainty regarding the fairness of the trial had kept the community restless, and finally interested church groups requested investigation by a disinterested agency.

A committee appointed by the church groups in Washington co-operated in the work. A legal representative, Mr. Wyckoff, was sent to Centralia to make an extensive study covering the entire court record, newspaper files and much other documentary material. Personal interviews were obtained with the Governor, the trial judge, the present chief justice of the State Supreme Court, who wrote the opinion of that Court in the case, members of the prosecution staff, ministers, American Legion members, Industrial Workers of the World members and sympathizers, nine of the jurors, and all the prisoners. All the evidence was thoroughly examined and carefully weighed. While no attempt was made to pass final judgment on the guilt or innocence of the prisoners, an attempt was made to throw new light on the question, "Was justice done?" The decision was, that while the men were guilty of conspiracy in that they had used unlawful means of

defending their hall—some of the fatal shooting was done at considerable distance from the hall—they had not conspired to murder and their sentences were unduly harsh. The report was used widely by the Washington Committee in an educational effort, but there is no evidence that the report has had a decisive influence. Incidentally, it was criticized by the Industrial Workers of the World as well as by their enemies.

VIII. Inter-religious Conference on Permanent Preventives of Unemployment—1931

Arthur E. Suffern, Research Department, Federal Council

Although churches of all faiths throughout the country responded generously to the call for relief in the unemployment situation, it was thought to be highly important that the conscience of the nation should be awakened to the moral necessity of permanently eliminating the tragedy of unemployment, with the consequent suffering and loss. Therefore, the three national religious organizations before referred to jointly sponsored a national conference on Permanent Preventives of Unemployment in Washington, January 26-27, 1931. Over four hundred delegates from twenty-three states and seventy-five towns and cities attended. These included, besides church representatives, personal representatives of the governors of a number of states, federal government officials from the Department of Labor and Commerce and the President's Emergency Committee on Employment, editors, research students, social workers, representatives of city and state commissions on unemployment, officials of labor unions, business men, and professors of sociology and economics. The addresses made by employers, economists, government officials, labor representatives, and church leaders covered practically every aspect of the unemployment question, technical as well as moral. According to the philosophy of some people, this was an *irreligious* conference because it considered a problem with which the churches are not supposed to be concerned. A feature of the program was the announcement by an economist that he welcomed the effort of church groups to do what he despaired of getting economists to do. The proceedings of the conference were published and have been used for educational purposes.

Anybody who has taken the trouble to explore the reports of welfare agencies and to consider the evidence which they disclose of the suffering from lack of food, clothing and shelter can hardly be content to accept the advice of a leading business man that good

Christians, when they kneel down to say their prayers, should place the Bible under one arm, a copy of the Constitution under the other and expect God to rectify conditions created by the way human beings conduct their economic affairs. That advice, however, was seriously presented at the conference. Churchmen were warned that God and the church would "lose caste" with the people if the powers of government were used to cope with conditions created by poor management of the economic system. If such a philosophy prevails among business men to any great extent, or among churchmen, obviously there is need for increased emphasis on the moral and ethical necessity of taking steps to eliminate the tragedy of unemployment with its consequent suffering and loss.

During this depression the reduction in the standard of living among moderate- and low-income groups, the disastrous physical and psychological effects on the unemployed and their families, the burden on society of the increasing number of dependents, the inadequacy of work-relief or other forms of relief compared to an opportunity for steady work, the increase in the number of professional beggars, the handicaps to children in making use of their educational opportunities, and the increase in crime are symptoms of an economic and social disease which can be neglected only at the peril of all elements in society.

The conference centered its attention on ways and means of introducing greater stabilization in the economic system. To the attainment of this end employers and the government can make basic contributions. Within each plant and within each industry much can be done which will contribute to better co-ordination between industries. Government can help to balance production and consumption by planning and speeding up public works.

If a steady job cannot be given to all at all times, unemployment insurance is quite as necessary a reserve for workers as surpluses are for stockholders and bondholders. If unemployment reserves prove inadequate, society will have to provide relief in some form or other. The attempt to confuse people by calling unemployment insurance a dole will prove absurd, in the long run, in view of the extent to which we are dispensing doles in various forms of relief. If we want to provide for unemployment over greatly extended periods, it can be done out of reserves built up for the purpose. The inadequate funds which we are now collecting come from somebody's reserves in the form of gifts and taxes. Many people are becoming

conscious of the force of these considerations. The question is whether we shall have the will to face them.

The last session of the conference was devoted to the moral and ethical implications of the problem. A consideration of the demands of justice and of the need for an enlightened social conscience pointed to the need for modifications in the profit motive. The extent to which this means lowering the incomes of those at the top and raising the incomes of those at the bottom is gaining attention not merely because it is a moral question but because it is becoming a question of good business in connection with the need for a better balance between production and consumption. When morals are recognized as good business, there is some chance that they will have sufficient driving power to bring results. The churches, as a cross section of society, can play an important part in focusing attention on the relation between morals and good business.

Discussion

In attempting to bring the cases into a single focus Chairman Smith stated the main characteristic of each, and in doing so indicated that in all these cases there were essentially only two main issues and two main means of securing results. The problems to discuss thus were: first, were the churches right when, as in the Twelve-Hour Day and the Western Maryland Cases and in the Unemployment Conference, they sought by publicity, sometimes accompanied by relief, to remedy conditions that the churches believed to lead to moral degradation? Again, were they right when, as in the Open-Shop, the Centralia, the Marion, the Dairymen's and the Western Maryland Cases, they interposed by publicity and relief to prevent what they believed was unfair competition between capital and labor? And in the reverse, were the manufacturers right in the Detroit incident when they used their money power to put pressure on the church not to commit what they felt was an unfair interference in the conflict between capital and labor?

Harold M. Davis of the Nashua Gummed & Coated Paper Co.; Henry P. Kendall of The Kendall Company; Rabbi Sidney F. Goldstein; Charles Webber of the Union Theological Seminary; J. N. Johnson of Reimers and Whitehill; F. Ernest Johnson; Dewitte Wyckoff of the Bankers Association; A. E. Suffern; F. S. Blanchard of the Pacific Mills and many others responded.

Mr. Davis felt that the aim of the churches should be to do more of the work described in the cases and

on a larger scale. There is a vast untapped reservoir of power in the churches which is needed to solve our industrial problems. To tap it the ministers and church bodies must give up their outworn methods and take on the up-to-date techniques of the engineer. He described a Nashua project in which he is interested in which these techniques are being used by the church in industrial problems.

Mr. Kendall stated that his feeling up to ten years ago had been that the business of the church was solely to change the disposition of man and thereby impel him to good works. Since the business and other agencies directly concerned have not tackled the specific problems of the day he is now convinced, however, that the church should take a direct part as well. Though some ministers have shown more zeal than common sense in strike situations, there is an obligation on church people to interest themselves in these problems, whether or not mistakes are made.

Strikes have occurred all around Mr. Kendall's mills in the South, and his attitude has been that unless relationships built up from the beginning in these mills have been sound they will be affected with the rest. So far they have not been affected. He believes that bad management has been solely responsible for the southern-textile strikes, but that bad management exists among the labor unions as well as among the employers.

He warned the church bodies against blindly supporting badly led unions which make unreasonable demands, and pointed out that some fights for the open shop have been justified as disciplinary measures for bad union leadership. This kind of a fight is welcomed by the thinking union member who is powerless to correct such leadership.

If the church is to enter into industrial problems, as he now believes it should, it must do so both with an open mind and a cautious step, for the issues are not simple but complex.

Rabbi Goldstein expressed satisfaction in Mr. Kendall's belief that the church should deal in a large way with industrial and other community problems. In order to do this study is necessary, and Mr. Davis was incorrect in his statement that ministers are using an outworn technique with timid hearts. They are no longer devoting themselves to preaching only; they are gathering facts and analyzing conditions in accordance with the newest techniques. Some of them have done extensive first-hand study of the southern-textile situation. They have lived in the mill towns, visited plants, studied laws and processes and have protested

against the long hours and other evils that they have discovered. They are trying to build up consciences in corporations, a difficult task because the conscience is a part of the soul and so few corporations have a soul.

If the churches can bring about a change in conscience of corporations something can be achieved in solving the problem of unemployment. When productive capacity of men is increased working hours must be decreased to make the work go around. Such a recommendation was made at the Washington Conference on Unemployment. The engineers who are serving corporations should take on the task of relating the productive capacity of the men and women of America to their consuming needs.

A great many engineers believe that the present difficulties are due to overproduction, but those who are studying the problem from the point of view of people's morals have come to suspect that something else is wrong. The trouble is really underconsumption. People lack the purchasing power to supply their needs. When a great proportion of the American people, and whole populations abroad, are undernourished and even starving it is stupid to speak of overproduction. An inequitable distribution of income is the difficulty.

Simon Patton said twenty-five or thirty years ago that we were living in a surplus civilization, and we still are. The trouble is that not more than 30 or 40 per cent of the people can purchase what they need in the way of food, shelter, clothes, medical care, recreation, etc.

The time has come for the churches and synagogues to appeal to the engineers and industrialists of the country to bring about a redistribution of income. If the chemists of the world would refuse to have anything to do with the processes of war, wars would very soon come to an end. In the same way, if engineers would say that they were interested primarily in saving human life, and only secondarily in saving motions, materials and money, our social problems would come to an end.

Mr. Webber pointed out the difficulty in getting even the adequately informed ministers to express themselves in the midst of industrial controversy. They are so involved as to the sources of their support that they do not dare to speak their minds. The ministers need not only to study situations but to acquire the moral courage to declare themselves.

Mr. J. N. Johnson, who had recently been in Washington to present an unemployment plan involv-

ing a system of national employment exchanges, brought out the prevailing ignorance there and throughout the country of the existing governmental agencies that could help in this situation, such as the employment service of the United States Department of Labor. He suggested that the churches might take upon themselves the job of spreading information on such services as those of the Department of Labor.

Mr. Johnson of the Federal Council of Churches replied to Mr. Kendall's warning to the churches not to prejudge the issue in union controversies by saying that the Federal Council has never maintained that an employer is morally obligated to deal with a union simply because it is there. In the case in which a stand was taken against the open shop a national campaign had been organized against labor. The mere possession of a union card excluded a man from work. The churches fought for the principle of the worker's right to organization affiliation.

He also explained, in response to a suggestion from Mr. Wyckoff, that the process through which one of the Federal Council reports must pass before publication insures their not going off half-cocked on a subject. A small committee is appointed by the General Committee of the Research Department. When a study is completed this committee first approves it, passes it on to the General Committee and they in turn pass it on to the Administrative Committee of the Council. This means a discussion at every point by groups with a variety of interests, including experts. The principals in the case are also informed at every stage in the development of the report and given a chance to suggest changes.

Mr. Suffern added that the committees are largely made up of individuals outside the Council. He considers the submission of data to the principals at various stages as very important in establishing the reliability of the data.

At this point, as the discussion had already lasted over three-quarters of an hour, Professor Smith adjourned the meeting and dismissed the stenographer. The meeting immediately reconvened, however, with full membership and continued for another three-quarters of an hour. During this time much of the most valuable discussion occurred, but unfortunately was not recorded. There was vigorous discussion of the position of the church in particular cases, both those cited by the churches and those introduced by Mr. Kendall and Mr. Blanchard. While there was much disagreement on particulars, there was a general

consensus of opinion that whether we consider business as a whole or individual businesses, organized religion or personal religion, there is great danger that technical business ability will become wise in its own

conceit, unless it is subjected to, or accompanied by, a critical sense of human and spiritual values which religion should do its part to provide in the world of human affairs.

Further Notes on Discussion of January 27th Meeting Addresses

DR. HENRY PRATT FAIRCHILD, Professor of Sociology, New York University, expressed surprise that such a group should spend so much time in discussion of "future depressions." He thinks it time that we ceased to assume that we must go through these cycles of depression decade after decade and generation after generation. If we were willing to face the facts he believes that we could find ways and means of reorganizing our social and economic structure so that depressions would not be necessary.

He quoted Sir Norman Angell as stating that we all complacently assume that what amounts to anarchy will work in international affairs, when we know it will not work in local and national affairs. Co-operation among its constituent parts is necessary in the running of the United States and yet a large part of the world assumes that no organic relationship is necessary in running world affairs.

Professor Fairchild is convinced that a complete overhauling and reconstruction of our elementary economics is necessary. For the last 150 years we have been dominated by a peculiarly inverted economic philosophy. We have thought that the one important thing was production and have forgotten that its sole purpose is consumption. We have been trained for generations to think of ourselves as producers instead of consumers and it has affected our whole philosophy of life. We have got to realize that the old economic system was built on assumptions. We must be realistic and start with the human being, find out where he gets his practical power of consumption and relate that to the economic system as it exists. Professor Fairchild believes it all boils down to a question of ownership,

both of products and of producing units. We must devise a logical, consistent system of ownership that takes into account the human being as a consuming unit and recognizes the fact that production has no use except as an instrument that makes consumption possible.

MR. DANIEL M. BATES, President, Bates Incorporated, Philadelphia, put himself in the place of the average business man in his reaction to the suggestions of the evening. He agreed with the two Professors Fairchild in their statements that consumption is now the important thing, and suggested an emphasis on the selfish return to the business man of sharing profits in the form of higher wages which will increase consumption.

MR. JOHN J. HADER said that three words, "purpose," "organization" and "emotion" had come to his mind in the course of the discussion. The first and last are very closely allied. We must have a socially valid purpose with emotional dynamics behind it to create an intellectual as well as a social organization. Those who have studied the Russian situation agree that the Marxian formula gives a cohesive power to one-man thought in social organization. Instead of this cohesive power we have here chaos and disintegration. The formulation of a socially valid purpose must be followed by social organization.

Public Administration

A Field in Urgent Need of Scientific Management

Introduction

By **LUTHER GULICK**

Director, Institute of Public Administration, New York City; Eton Professor of Municipal Science and Administration, Columbia University

THE direction of the government of the City of New York, of the State of New York, or of the federal government is a much more difficult task than the direction of the United States Steel Corporation, the American Telephone and Telegraph Company or the General Electric Company. I cite these governments and these business enterprises merely as illustrations. Because of this fact, scientific management is at the same time more difficult of application and more necessary in the field of public administration than in private industry.

By scientific management, I mean the rational determination of purpose and the intelligent organization and utilization of man-power, technology and things to accomplish that end.

Viewed in this light, it is vastly more difficult to apply scientific management in government than it is in industry. These difficulties arise (1) because in government we have what is popularly known as "politics," a system of management under which production and service are incidental interests of those in control, whose main objectives are jobs, commissions, the sale of special privileges and the maintenance of an outside vote-gathering organization; (2) because in government we have democracy, which even under the best conditions is control by the many; (3) because the environment of government and the scope of operation of each unit are more complex than are those of any industry; (4) because the doctrine of state sovereignty and home rule in local affairs makes large-scale production and standardization virtually impossible in the field of government; and (5) because of the teleological enigma of government. By definition, scientific management requires the determination in advance of the purpose to be accomplished. If you are manufacturing rails, motors, or shoes this is not a difficult affair. It is a vastly different problem when you are dealing through a single enterprise with streets, water supply, sewers, police and fire protection, education,

recreation, the regulation of utilities, the control of individual action in large spheres of conduct, the planning of cities, taxation, the manipulation of economic forces, and the thousand and one other things which government does or controls. In all of these fields, before action is taken the end in view must be defined and this must be done through democratic channels, not through the easy methods of dictatorship or narrow control.

It is because of all these difficulties that scientific management in public affairs is of supreme necessity. The very fact that government enterprises are larger in man-power and more complex in function than private industries makes scientific management the more essential. Moreover, every governmental unit is a monopoly. It, therefore, is heir to all of the diseases of monopoly. Inefficiency and bad management when reflected in bad service do not automatically terminate the life of the unit. There is no corrective competition in its structure.

Since scientific management is so vitally needed, though so difficult to achieve in public affairs, it is appropriate that we should devote this session of the meeting to a discussion of scientific management in public administration. The topic will be brought before us by Admiral T. T. Craven, the Chief Co-ordinator of the Federal Co-ordinating Service, who is speaking to us on the subject of "Co-ordination in Public Administration."

The discussion will be by representatives from the field of public administration and from the field of private administration. I shall endeavor to call on the different types alternately.

Co-ordination in Public Administration¹

By **ADMIRAL T. T. CRAVEN**

Chief Co-ordinator, Federal Co-ordinating Service,
Washington

IT IS my desire in speaking on this subject, first to indicate the reasons prompting the establishment of the Federal Co-ordinating Service, then to give an outline of the mechanism of the service and the results accomplished by it, and finally to express views

¹Paper presented before a meeting of the Taylor Society, New York, December 4, 1931. Discussion of the paper was arranged by the Institute of Public Administration.

regarding some of the larger problems with which co-ordination is confronted.

It is not within the scope of a paper on the guiding influences of co-ordination to discuss economics. We all know that men, money, material and machines, together with merchandising methods and markets, are the elements of industrial civilization, and that in human problems, the factors are inter-related in the most complex manner. In whatever degree we recognize that in economics and industry the law of supply and demand controls and adapts these elements, nevertheless we are warranted in seeking a more scientific regulation to prevent the wastage that accompanies the working out in time of any such general principle.

Grouped about us we view the involved perplexities of advancing civilization. Having much the same basis as those confronting the tribes of ancient Israel, all insistently now demand increasing, unremitting and intelligent attention in order that the frequency and length of gaps in the cycles of prosperity may be lessened.

Theoretically, the reconciliation of the details of the federal government in accordance with a master plan, plastic to executive judgment, and with a definite end, should be a simpler matter than that of guiding widely dispersed industries competitively producing for profit.

But politics in all governments is a highly competitive activity. Legislative expediency to meet particular and unrelated situations quite often ultimately makes for confusion and, in a message addressed to Congress on January 17, 1912, President Taft remarked regarding the efficiency and economy of American public business, that a vast organization of concern to every taxpayer, costing billions annually and including a personnel of more than half a million, "has never been studied in detail as one piece of administrative mechanism. Never have the foundations been laid for a thorough consideration of the relations of all of its parts. No comprehensive effort has been made to list its multifarious activities or to group them in such a way as to present a clear picture of what the government is doing. Never has a complete description been given of the agencies through which these activities are performed. At no time has the attempt been made to study all of these activities and agencies best fitted for its performance, to the avoidance of duplication of plant and work, to the integration of all administrative agencies of the government, so far as may be practicable, into a unified organization for the most effective and economical dispatch of public business."

The outbreak of the long struggle beginning in 1914 supplied a bottomless receptacle for almost anything America could produce. Once we had entered the arena, everywhere became manifest the importance of better guiding, if not checking, the hitherto unrestrained competitive tendencies of American enterprise. An enumeration is unnecessary of the many associations, boards, councils and committees, set up for the adjustment of badly tangled industrial lines.

The War finished, government turned the regulation of private industry back to those directly concerned therein, but when such was done, a great industrial authority recommended that: "Such practices of co-operation and co-ordination in industry as have been found to be clearly of public benefit should be stimulated and encouraged by a government agency, which at the same time would be clothed with the power and charged with the responsibility of standing watch against and preventing abuses."²

A direct and immediate result of war experiences, which had amply confirmed the views previously expressed by a former federal executive and clearly demonstrated the value of co-ordinative effort, was the creation by statute of a Bureau of the Budget, for the purpose of adjusting the remittances of the taxpayer with the insistent demands of independently proud branches of federal business.

Strongly backed by the President, General Dawes, with characteristic energy, proceeded to substitute co-operative common sense for vanity and pride in independent action. He sought to put business ideas into a political organization in which co-ordination occupied a high stool in a very dark corner, in order—as he wrote—"that the largest business in the world will not, as heretofore, continue to be the worst conducted."³

As an addition to the legally constituted bureau, intended to co-ordinate the financial needs of various executive branches with the financial condition of the federal treasury, an office was established for the co-ordination of interdepartmental routine.

The liquidation of the huge surplus of war accumulations was a colossal business venture then immediately confronting the government, but the creation of a very extensive organization with which to carry on was not found to be necessary. Administration

²Baruch, B. M., *American Industry in the War*, Washington, Government Printing Office, 1921. pp. 98-100.

³Dawes, C. G., *The First Year of the Budget of the United States*, New York, Harper & Brothers, 1923.

and not organization was wanting. The putting to work along constructive lines of a small but effective administrative unit, while overcoming bureaucratic resistance, became the immediate task for General Smither, our first Chief Co-ordinator.

Liquidation proceeded satisfactorily and on November 8, 1921, an executive order enlarged and more clearly defined the duties of the Chief Co-ordinator, who was given responsibility of exercising general supervision in all interdepartmental business activities. To this end that official was authorized to call on bureau chiefs and employes for information and they were required to attend conferences at his request. The order specifies that a decision of the Chief Co-ordinator, transmitted to the heads of establishments concerned, shall be final, except that an appeal may be made to the Director of the Bureau of the Budget, and if not sustained, then to the President himself. A time limit for such appeals is set.

Congress, non-responsive if not openly skeptical regarding the advisability of adding to the very complicated machinery of governmental organizations, has enacted but one piece of legislation touching on co-ordination. This, contained in the Army Appropriation Bill approved in February, 1925, reads as follows: "Hereafter no commissioned officer of the Army, Navy, or Marine Corps shall be deprived of his right to pay and allowances while serving on such duty as the President may direct in the co-ordination of the business of the government, as now being conducted by him under the general supervision of the Director of the Bureau of the Budget; provided, that the number of officers detailed to this duty shall not at any time exceed twenty-six."

The Co-ordinating Service, with more than a decade of experience, endeavors to promote economical federal management that eliminates overlapping and makes useful to *any* executive department or independent establishment information and resources available and idle in other departments. As inimical to the efficient functioning of organization as the old "water-tight-compartment" type of bureaucracy, would be the exercise of an excess of zeal without responsibility for action, harassing legalized organization with well-meant but ill-advised suggestions for improvements in procedure. Therefore, aiming simply to discover situations needing collaboration, and to facilitate action wherever co-ordinated effort may promote efficiency and economy, both responsibility and credit for actions taken are left and entirely belong to the departments

and establishments that are concerned with them.

The Service in Washington comprises the Chief Co-ordinator, his assistants, and the various boards operating under his direction. Under him in the field are nine area co-ordinators and, scattered about the continental United States, Alaska, Hawaii and Porto Rico, wherever several federal activities function, are about 300 federal business associations made up of some 13,000 individuals already engaged in governmental business.

The role of Chief Co-ordinator is simply that described by Oliver Sheldon in the *Harvard Business Review* in an article entitled "Policy and Policy Making": "To hold the reins without restraining the vigor; to guide the way without pulling at the reins; to urge forward without the whistling of the whip; to determine the halting place without applying the brakes—is indeed the task beyond all others. Co-ordination encounters the greatest obstacles and difficulties, yet calls the most imperatively for performance."

Coincidental with the enlarged mission assigned the Co-ordinating Service came the establishment of the various federal boards, through which a considerable part of co-ordinating routine is conducted.

Details of the organization and duties of these co-ordinating agencies are set forth in the Congressional Directory and will not here be attempted except in a very general way.

The organization of the Federal Purchasing Board is fairly typical. This board is composed of one representative from each department or establishment having authority to purchase supplies, together with a representative of the Federal Specifications Board, who acts as liaison contact between these two activities. The Chief Co-ordinator is ex-officio chairman of it as of other boards, but the executive chairmanship is delegated to an official in the Chief Co-ordinator's office. The board's investigational work is performed largely by committees and when a committee report is adopted in its final form and approved by the Chief Co-ordinator it is promulgated as a guide to all departments and establishments. The board endeavors to discover cases where it may be practical and economical to have two or more departments pool their requirements, in order that the one department best fitted for the purpose may purchase for all. This board has also brought about a gradual extension of the uses by others of the inspection service of one department, thus eliminating travel and overhead expenses and giving a flexibility to the service of inspection.

The operations of the Purchasing Board are closely inter-related with those of the Federal Specifications Board, which compiles and promulgates standard specifications for materials and services, bringing specifications into harmony with the best commercial practice. It also endeavors to broaden the field of supply. The Director of the Bureau of Standards is ex-officio chairman of the board which consists of groups of technical committees made up of experts selected for their special knowledge of particular commodities or classes of commodities. The board has promulgated its seven hundred and seventeenth federal specification, and it is now quite a usual thing to see manufacturers placing on their products the statement: "This product conforms to United States Government Specification _____."

The Federal Traffic Board was established for the purpose of effecting a better business administration throughout the government service in the complicated business of handling of passenger, freight and express shipments. It utilizes in a practical way the various available carrying facilities and institutes methods for the prompt handling of the government's traffic. Every government shipment of two or more carloads is referred to the board for routing and through this control and by means of its contact with the carriers the board has been able to obtain directness of service and to effect large savings. As it exists at present it provides a skeleton organization around which might be built a federal traffic bureau, should such an activity ever become a necessity.

The Federal Real-Estate Board co-ordinates all matters affecting the real property of the government, including procurement, occupancy and disposal. It collects and compiles data pertaining to owned or leased real estate and suggests changes that may be desirable in the interest of the economical use of lands or buildings. All projects for the purchase, sale or lease of real estate are required to be submitted to the board for clearance. Its decisions form the basis of the Surveyor General's action on all real-estate matters.

The Interdepartmental Board on Simplified Office Procedure, engaged in devising standard forms and practices for federal offices, has been very successful in eliminating a mass of non-standard material and has reduced the supply schedule on items of common use from many hundred to a relatively few items.

The Interdepartmental Board on Contracts and Adjustments renders valuable service in standardizing

business arrangements and in reconciling differences.

The Patents Board and the Forest Protection Board were created to deal with specific problems, the first to formulate a governmental policy with respect to handling the inventions of federal employes, and the second to co-ordinate and bring together for greater efficiency the federal activities engaged in the various phases of forest protection.

The Federal Standard Stock-Catalogue Board is actively at work on a compilation which will simplify widely the procurement, care and issue of government stores. Recently a board has been appointed to study the important matter of reconciling and co-ordinating the collection, arrangement and distribution of governmental statistics.

Each board, in its particular field, accomplishes valuable and constructive work, but it should be kept in mind that these agencies are not given final executive power. They are intended to act simply as standing committees in which representatives of departments and establishments are assembled in order that information may be made common to all and that common interests may be served. All duty with boards is in addition to the departmental duties regularly belonging to members. The boards have found to be of particular value as groups for the contacting of federal activity with that of industry.

Enlightenment is desirable with regard to costs and accomplishments of the co-ordinating branch now accepted as being essential and businesslike.

Not much is to be said regarding costs. The payroll of the Army and Navy officers and the sixty-seven civilians engaged exclusively in work of co-ordination annually amounts to about \$307,500, but there have been no additional demands upon the Treasury because of it, for both the personnel and material necessary for the organization are drawn from other establishments.

Concerning accomplishments, President Coolidge, in an address on January 29, 1927, stated that: "One of the great lessons we have learned in the transaction of our business is the value of co-ordinated effort. Co-ordination in any business is essential to success. The nation's business is no exception. For many long years the executive departments and establishments operated independently with little or no concern for the common good of all. This is no longer the case. The old order of things has disappeared. In its place we have a well co-ordinated executive branch of the government. Departmental lines have given way and

departmental prerogatives have willingly surrendered to policies and practices which are adopted for the best interests of all."

Since the inauguration of the service of co-ordination, directly traceable savings—not including inter-departmental transfers of surplus property—have totaled over \$19,000,000. During the past fiscal year savings, including those effected through transfer of property, sponsored by the Federal Co-ordinating Service, amounted to nearly \$6,000,000. The total value of all property exchanged between departments, through the processes of co-ordination, now amounts to about \$153,000,000.

More important, however, than all the economies effected directly through co-ordination is the incalculable value of the development interdepartmentally of a conception of co-operation and service unity. There are clear indications that *how* expenditures are made has become a matter of moment quite as important as *who* makes them. It is also coming to be recognized that the best administrator is not necessarily he who succeeds in getting the most out of legislation for the purposes of his office, but is also one who, like a vice-president of any great corporation, makes the most out of such appropriations as may be allotted to him.

As it becomes evident that surrendering the control of details more directly concerning others always permits expansion and better effort in one's own domain, the red-tape-bound walls of isolation surrounding departmental prestige will have many gates, easing the way for unselfish co-operation and co-ordinated control.

Passing from a consideration of federal co-ordination we may concern ourselves briefly with more complicated problems in which the government is involved.

The statement of a German economist "that each nation should above all things develop harmoniously its natural resources to the highest possible degree of independence, protecting its own industry and preferring the national aim to the pecuniary advantage of individuals" applies with force to America.

Now directness is important, for, with machines quickening action, thought, planning and decision must get into gear. This is the power age. All modern industrial accomplishments, whether procurement, mass production, rapid transport, or the design of machinery and appliances for the conservation of time and labor, lead back to power. The efficient generation of energy by falling water, steam or internal-combustion engines;

the minimizing of waste in power generation, transmission and utilization, either in connection with individual plants or interconnected power pools, are co-ordinating problems of the first magnitude urgently demanding the scientific attention of engineering management.

Agriculture gives occupation to some ten million workers and upon it some thirty millions of our people look for support. The prosperity of the country is reflected by the work of the farmer now tremendously intensified through mechanization. The co-ordination of the procurement of agricultural commodities with distributors' requirements is a most pressing modern economic problem.

Depletion of our supplies of coal, ore, oil, gas and timber proceeds rapidly, though knowledge is common that better conservation of these resources and the co-ordination of their consumption with requirement are vital.

Co-ordinated power-driven tools have speeded up procurement of materials and the production of goods, while, at the same time, inventive genius has improved possibilities for prompt and cheap distribution. But transportation is replete with complication. Unless *co-ordination acts*, an unco-ordinated but scientifically developed power will continue a grinding wastage through processes of overproduction, and unco-ordinated, unscientific systems of procurement and disposal will continue to augment the dire possibilities of agricultural, industrial and financial depression.

While wise legislation is necessary to assist development and to make practicable the many adjustments continuously necessary in industrial occupations, co-ordination must be given life by those concerned in industry. It cannot come from others.

Scientific regulation, through the action of business associations and organization of the leading industries, may bridge a direct path through the maze of procurement, production and distribution. If successful in so doing it will prepare the way for the exercise of the co-ordinator's art.

Broadening of business management is a requisite for today. There is no such thing as complete national economic independence. Countries produce and distribute in accordance with world-wide demands. No longer is commerce pushed before the point of a bayonet, and the slogan that trade follows a protecting flag has ceased to apply. The guidons of traffic have become cost, insurance and freight, but those seeking the means for straightening and for freeing the paths

*Frederick List.

of intercourse of economic barriers find that tolerance and goodwill offer themselves as potent co-ordinating agents for effecting economic as well as social adjustments.

In scheming for the future, one cannot fail to observe that vitally necessary for the bearer of the increasing economic, political and international burdens, which coming years will load on American shoulders, is a scientific broadening of education along lines philosophical as well as practical.

For "it is ruinous conceit and stupid chauvinism to imagine that the perpetuity of any state, be it monarchy or republic, can be assumed solely by industrial pre-eminence, superior armament, mastery in the technique of foreign and domestic commerce, or shrewdness in the conduct of international relations. Valuable assets these, but edged tools and engines of destruction unless controlled by minds liberalized by habits of self-analysis, comparison and reflection."⁶

There are basic principles involved in our citizenship demanding recognition far better than that accorded them. To illustrate, let us turn to an army drawn up for battle, for in trained armies and navies, particularly, there is found that powerful co-ordinating factor known as discipline, making for harmonious attainment of common purpose. Sound discipline, not requiring compulsion, has for its principles loyalty, self-control, self-denial and self-sacrifice—all and everything for the good of service, organization and country. In our industrial relations the Army and Navy constitute the reserves; the commercial and business organizations make up the shock troops. Willing co-operation in these latter organizations is accepted as an essential. But what constitute the fundamentals of co-operation? They are precisely the same as those mentioned above as the principles of the discipline practiced by the reserves.

The importance of loyalty, self-control, self-denial, self-sacrifice, demanded in military services and desired in every walk of national and industrial life, together with the value of tolerance, are all accentuated as human relations become closely articulated. Ability to balance the human appeals of ambition and modesty, of desire and self-restraint, of envy and unselfishness, is a scholastic need of youthful citizenship. Stressing now the teaching of the elements of co-ordination in every home would be a constructive move in the direction of scientifically good management.

⁶Walsh, E. A., *The Fall of the Russian Empire*, New York, Blue Ribbon Books, Inc., 1931.

They are the fundamentals of accord, of religion, of society, of nationalism as well as of international comity.

Our standard of education, though in most respects the highest in the world, inadequately impresses the value of co-ordinated industrial economics. This is to be corrected. Education if well directed must proceed to awaken in the rank and file of coming voters a more unselfish interest in the governmental regulation of federal business and in the co-ordination of governmental action in accordance with international as well as national requirements. Education, by stressing the ability to co-ordinate the elements of one's own character while engaged in bringing together the abilities and activities of associates, develops leadership.

In closing, I, who have spent two score years in observing the trend of affairs in various quarters of the globe, may be pardoned for expressing other views of the organized "reserves" than that held by a writer who recently gave the country's two great public schools of nationalism, the Army and the Navy, a proud position in a list of "wastes" in advance of that occupied by "harmful drugs, narcotics, and patent medicines."⁷ The day of the soldier and the sailor is not done, for peaceful international co-ordination is an art, as yet in its infancy. Ever, unexpected shifts in economic conditions which could not be foretold, and assertion of national ambitions difficult to comprehend, have constructed troublesome obstacles in the paths of tribunals designed for the peaceful regulation of affairs.

The armed "reserves" normally have little encouragement to organize for the occasion when the nation's strength musters for compelling the co-ordination, refused to the diplomat or to a thoughtfully judicial body. Not uncommonly, near-sighted politics exercises demoralizing command and sometimes the principles, carefully taught to juniors, have been forgotten by those occupying positions of high responsibility. Then authority's vanity for decision and personal ambition have eliminated co-ordination from the picture.

For the two military services every-day opportunities are infinite for useful common endeavor, quietly, economically, progressively and efficiently promoted.

Co-ordination is the nervous action controlling economics—the fiber and sinew of community life. It is not to be confused with scientific management for it is the greatest of arts involving the placing and treat-

⁷Chase, Stuart, *The Tragedy of Waste*, New York, The Macmillan Company, 1925.

ment of complicated human mechanisms, not lending themselves to standardization as do machines, in ways best promoting health, contentment and prosperity.

Co-ordination is the elusive "dove of peace." When the extension of co-ordinated industrial lines has become world-wide and they carry, as the important part of traffic, an abundance of international goodwill and tolerance, the intensity of struggles on the advance lines will be reduced, and everywhere a sweeping reduction of the armed reserves will then have a strong and a logical appeal.

Discussion

King Hathaway.¹ I cannot tell you with what trepidation I attempt to discuss Admiral Craven's paper. My hesitation and qualms are due to the fact that I have a fair idea of the magnitude of the undertaking and of the difficulties and problems that Admiral Craven has so concisely indicated in his paper.

I disagree in some measure with Admiral Craven's final statement that co-ordination is not to be confused with scientific management. Perhaps "confused" is a term that I may have misinterpreted. Co-ordination, however, is one of the objectives, one of the purposes of scientific management; without co-ordination in an industry one cannot have scientific management. In industrial affairs it is, however, a relatively simple matter to bring about co-ordination because we can, far more easily than in public administration, tear down what exists and construct a plan of organization which facilitates co-ordination. We do that by shifting over from what Taylor referred to as "military organization" to functional organization. We can bring about not only a rearrangement of the organization but of the various departments and activities so as to avoid lack of co-ordination. Lack of authority, legal limitations and politics make the task more difficult in public administration; particularly in so vast an organization as our federal government, which employs something over half a million people and has an operating cost of some billions of dollars annually. It is pretty difficult to visualize an industrial undertaking of that magnitude, and I doubt very much if we should get very far were we to attempt to visualize it as a whole, as we do in the case of an industrial undertaking. It is too much like trying to visualize the universe. To a limited degree it can be done but we must finally get

down to units and attempt within them to bring about co-ordination of activities.

A complete new set-up of governmental activity should be worked out along logical lines which would to a great extent automatically result in co-ordination of effort and the elimination of duplication and waste.

In an industry, the first thing that I attempt is to set up a classification of its activities, its expense, its function, regardless of what may exist at the time. In other words, I aim to set up an ideal plan of organization, not with the idea of bringing it about at one fell swoop but as something to work toward. It would be a very fine thing if that could be done for the United States Government, although it might take a century to bring about all the desirable changes that it would indicate. We cannot wait that long for results and so, of course, are constrained to do everything possible within the limitations imposed by an existing set-up.

I recall my own experience in bringing about co-ordination during the War when we set out in the Ordnance Department of the Army to organize a Supply Department, something which had not existed before as a distinct activity. There had been four divisions, each to a great extent a complete business in itself. One of them furnished the so-called equipment, such as harness, saddles, spurs, buckets and cartridge belts; another furnished guns, meaning cannon, together with their ammunition; another furnished carriages for the cannon, and the fourth supplied small arms and ammunition. We entered the War with each of these four divisions going ahead largely on its own program. The only co-ordination was supplied by one individual, the Chief of Ordnance. As a consequence we had in the early stages of the war enough of certain easily procurable material for an army of, say 1,000,000 men, whereas we had field artillery enough for less than one division, nor could we hope to have in the same period of time field artillery for more than that. We found that each of these divisions was in some measure competing against the others; that, as Admiral Craven indicated, we might have inspectors from two or more of those divisions going into the same plant in the same town, at the same time, to inspect material.

That set-up impressed me at the outset as being unsound, so, although it was none of my business at the time, I sketched out a plan of organization quite different but embodying the principle of co-ordination

¹Consulting Engineer, New York, N. Y.

and functionalization. While that plan met with no response, and in fact seemed beyond the possibility of accomplishment at the time, a few months later the confusion reached such a stage that it was seized upon as a solution of the problem and put into effect.

In that instance a plan of co-ordination ready in advance saved us from possible disaster or at least from a very unpleasant situation.

That plan of co-ordination went only part way. It affected only one department of the Army. Logically it should have embodied certain functions of every other supply or service department of the Army because, while we eliminated the competition and overlapping within the Ordnance Department, those same things existed as between the Ordnance Department and the Signal Corps, the Quartermaster, and various other supply-service activities.

While in Japan a few years ago I was invited to visit one of the navy yards and give them my views on scientific management as it might be applied to their activities. As I talked to their officers after having been around the yard, I mentioned a number of things which were distinctly inefficient. The reply was, "Yes, we know that is so but we cannot help it. We are governed by appropriations by the Diet, by civil service regulations," and so on.

It reminded me so much of the situation that exists in the United States where in many governmental activities able and conscientious men are prevented from availing themselves of opportunities to eliminate waste and inefficiency. Let me cite two instances with which I am familiar. General Crozier attempted to introduce scientific management in the operation of the arsenals, and under the direction of Carl G. Barth an excellent application was made at Watertown Arsenal. It was being extended to Frankford and Rock Island Arsenals, when Congress attached a rider to the Army and Navy Appropriation Bills prohibiting the use of any time-measuring device or the payment of any incentive wage for work done. Perhaps the significance of that is not so apparent at first glance as it is when considered further.

During President Taft's administration the Secretary of the Navy, Mr. Newberry, at the instigation of Admiral Goodrich, decided to have scientific management applied in the navy yards and in connection therewith bring about a co-ordination between the activities of the several bureaus in the yards. Shops had previously been operated by the Bureau of Steam Engineering, by the constructors and others. We set

out in the Philadelphia, Boston, and in particular in the New York, Navy Yards to work out an application of scientific management through which the co-ordination of those various activities could be effected with resultant economies in operation; in other words, to put those yards on a plane at least comparable with the best of our merchant yards. The Secretary made a serious tactical error in designating the Construction Corps officers as managers of the yard. This at once brought down upon them the opposition of all of the other branches of the Navy. If he had only established a new corps called the Management Corps and drawn officers from any department in which there was qualified personnel, it would have been all right. As it was the work was completely overthrown the minute Newberry went out.

I mention these cases as an indication of the discouragement which confronts anyone attempting co-ordination of activities and the application of scientific management in governmental circles. Great credit is due those officers of the Army and Navy who steadfastly carry on despite such discouraging experiences in operating our navy yards and arsenals efficiently.

The value of the work that Admiral Craven's bureau is accomplishing is undoubtedly of far greater importance than is indicated by his figures, which may be regarded as economies directly traceable to these efforts at co-ordination. The influence exerted on the thinking of men engaged in the various branches of governmental activity is probably effecting savings which are never known, because there is nothing against which to measure them.

The question comes up as to how this Society can help Admiral Craven in this work. We all complain about the waste of effort in governmental activities. We must realize nevertheless the great value of much of the governmental work that is being carried on. Perhaps we cannot help by any direct effort but we can help by holding up before the public and industry, before the people in whose interest the government is operated, "Simon pure" standards of management regardless of the political difficulties, both internal and external, with which Admiral Craven has to contend. Through influencing the thinking of Congress, of people who are engaged in governmental activities along right lines, we can perhaps contribute to this great work and ultimately benefit ourselves, either by reduction in taxes, in the expense of conducting the government, or by making government yield to us indirectly greater profits.

Hon. Seabury C. Mastick.* When the Old-Age Security Commission was organized I had some of the political difficulties that have been referred to here. We had a fair appropriation and a number of political friends wanted some of it. I said to them, "If you will give me a research director you can have all the rest, because if I can get the facts I am sure I can put over the proposition." Dr. Gulick was the research director I secured and his work has been a standard in old-age security throughout the country. Our recommendations have been adapted by a number of other states.

As a legislator I realize the difficulties of efficient government and of co-ordination between the different departments and between the legislators and the public.

A legislator must be a man of all trades. To cite my own case, I have been a member of the Committee on Education, on Labor and Industry, on Banks, on Military Affairs, on Public Health, and so on. On each I was supposed to exercise judgment on the matters which were brought up by experts in the various fields. Of course it is impossible for one person to know all of those subjects thoroughly. I have not mentioned taxation and public finance, which, as a matter of fact, have been my chief studies during the past decade.

I do not quite agree with those who say that government should be conducted as a business, because it is not a business. In the present situation business is contracting its efforts, reducing its working forces, changing its prices, but the government goes on in the same way in bad times as in good. In this State today we have not only to keep up the impetus of relief but we have all the other governmental activities to keep up. We cannot contract our education or our hospitals. We can cut down on highway building but the minute we do it we meet the accusation of throwing people out of employment or of failing to provide work for those who are unemployed. We do not have the opportunity to exercise business judgment in governmental affairs. The best we can hope to do is to approach business methods as closely as politics will permit us to do.

Dr. Gulick drew a rather black picture of the motives which animate politicians. I shivered

a little as I listened to him. In spite of the truth of his remarks, however, I believe a good many of us do try to work for the good of the State.

In talking to the New York State Chamber of Commerce yesterday I had an opportunity to answer a gentleman who talked about the philosophical and economical aspects of government. I said there was no such thing in politics. Legislators do not listen to philosophical and economical arguments. Their ears are attuned to what the folks back home will say. If we listen to philosophical and economical arguments and do not please the people back home we are not returned to the legislature, and if we are not returned we are not only useless to the State but we are out of luck. And none of us wishes to be out of luck.

I have been through a lot of campaigns and I do not really believe that any of the larger things I have done for the State, like tax reform or old-age security, has had much to do either with electing or re-electing me. What has elected me has been the little bits of head-line publicity on bills affecting local welfare. Those things are of very minor importance compared with the great scope of the State's activities.

I have jotted down a few things that I believe we can and cannot accomplish in improving the efficiency of government. In business you have control of your employees. You can hire and fire them. In government you cannot. If you get an inefficient person under Civil Service you cannot get rid of him. It seems at times as though people under Civil Service have lost all ambition. There are none of the Taylor incentives. The harder a man works the worse it may be for him, as he may be antagonizing his fellow workers. You cannot expect the same efficiency in government as in business, as you do not have the same control over your employees.

A second point is that in government there are certain exact specifications with which one must work in letting contracts. These are necessary to protect the government from those who would take advantage, but they cause delays and inefficiency which would not occur in private business. When bids are submitted by a number of contractors one may be found to be much lower than the rest. Instead of accepting the contract, however, he frequently tries to get out from under and have a re-submitting of bids. The next time his price will

*New York State Senate, Albany, N. Y.

be closer to the fellow whose bid was next higher than his. I have in mind a particular instance of a man who submitted a bid, under bond, that was over \$100,000 lower than all the rest. When he discovered that he hired a political lawyer to get the bond discharged, submitted a new bid under bond and got the contract at \$100,000 more than his first bid. We cannot very well prevent this sort of thing because we find it necessary to build up cumbersome protections against both the politician and the private individual in governmental work. Another reason why we cannot have the same economy and efficiency in government as in business is that we do not have long-time planning in governmental activities because of shifting political conditions. A prison may be started under one commissioner, for example, and the next one will think he wants something different. We have such an instance in our Harlem Valley Hospital. We started out to build a prison and spent a great deal of money. Then the Governor thought it was not needed as a prison, the commissioner thought it was in a bad location for a prison, with the result that it became a State hospital. I do not know what was the loss in shifting plans but it must have been considerable.

Another reason why the spirit of economy and efficiency does not prevail is that they are not rewarded. When I was chairman of various commissions I frequently turned back as much as 20 per cent of my appropriations, and what was the result? They gave what I saved to someone else and cut me down to my latest figure on the next job I was asked to do. Since there is no reward for efficiency we all try to find some way of getting rid of our extra money before it goes back into the treasury.

But the picture is not all black. A good many people are interested in governmental efficiency, but they do not know "how" to accomplish it. President Hoover says that taxation on real estate must be reduced, but he does not say "how." Governor Roosevelt says the same thing, but he does not say "how" to bring about the change. Governors Roosevelt and Smith, county and municipal officials, are criticized for high costs; consolidations and changes in law are suggested, but no one says "how" they are to be brought about. When you try to arrive at the "how" you run into difficulty,

because someone is going to profit by the expenditure of the money.

I have been working very hard to reform the tax system of this State—to equalize taxes and find some way of keeping them equalized. I have collected volumes of figures and have a pretty good idea of the sources of revenue in this State. I want to suggest some things that *might* be done and then some that *can* be done.

We might establish limits of taxation. That would tend toward efficiency because it would give us a true budget. Our budgets now are largely estimates of expense. We decide what we would like to spend for necessities and for the new things suggested by propaganda. We put over against these items the amounts expected from various sources of revenue and the balance is put on real estate. If we could limit the tax on real estate, we could know what our deficit would be for each period.

I have operated a factory on my own account and a munitions plant for the Navy. I did not have to show a profit in the Navy, while I was expected to show a profit in my own establishment. In one case I had a fixed limit set by my stockholders within which I could work; in the other I had no limit at all, provided I could get the appropriation. In both cases I tried to work efficiently, but in one I had a very present reward in the bank and in the other I had to look to my reward in heaven.

A uniform system of budget making is essential.

Another thing that might be done is to set up a form of outside control of expenditures. No such control exists at present. The people are constantly demanding things and at the same time asking for reductions in unnecessary expense. The problem is to find out what is unnecessary. From a political point of view anything proposed by a sufficient number of voters is necessary. If there was someone not responsible to the electors of a particular community who could pass on these expenditures, as is done successfully at present in three states that have this form of control, it would act as a check on unnecessary expenditures. This of course infringes on the principle of home rule which is, I believe, a good principle in small communities. It is not so wise, however, where the home does not rule. People have the same power in larger areas but do not exercise it, with the re-

sult that a tremendous tax bill piles up with nothing to pay it. I doubt if this outside control is a possibility in our present state of political thought in New York, but it is a thing to look toward.

We can, however, expect better specifications and a better educated personnel than we now have. We can get tighter and wiser specifications than we now have in New York. We are learning a little more about how to accomplish this all along. We can also have a better educated personnel. Those at the top are pretty able and well equipped for their work, but the workers on whom they have to depend are not always from the educated group.

The Mayors Conference is, I understand, establishing schools for policemen and firemen, as the State has done for its assessors, in an effort to bring these employees up to a higher standard. When standards are raised efficiency will be greater. If higher standards were demanded by the public greater improvement could be effected. We are prone to criticize destructively but not constructively. The public could demand better education for its servants through improvements in Civil-Service requirements. There should be in addition to the original Civil-Service examination an interim examination, say every five years. These would show whether or not the workers were keeping up to standard or improving on their jobs. Actuaries have to pass some seven or eight examinations at different periods and each passing of an examination means a promotion.

Above all things we must have economically- and efficiently-minded executives. When you have such an executive that spirit will permeate his whole organization. When you have one who is not so minded the looseness of his thought and method will also permeate his whole organization. To have an efficiently- and economically-managed government it is necessary to have an efficiently- and economically-minded executive at its head.

W. H. Leffingwell.* I have a great deal of sympathy with Admiral Craven. To endeavor to coordinate such a huge agglomeration of people is most certainly a man-sized job. In that connection I am sure he has heard, as we have in industry, all the reasons given by the Senator why it cannot be done. They can be elaborated upon *ad infinitum*, but we are

particularly interested in what *can* be done and should concentrate our attention on those things.

I suppose I was selected to discuss this subject because I know nothing about it. I have, however, had some experience. In 1925 Mr. Hoover, the then Secretary of the Department of Commerce, invited three members of the Taylor Society, L. W. Wallace, Wallace Clark and myself, to study the Patent-Office procedure. I personally went to Washington with a great deal of trepidation because I did not know anything about patents or anything about the government, and I was concerned as to whether I should have any suggestions to offer. It reminded me of my first job a good many years ago in the automobile industry. I believed all I had read in the papers about the efficiency of the automobile industry and I had stage fright. I had not been in the factory twenty minutes, however, when I saw things on every side that could be improved. I had the same impression after I got into the Patent Office. I want to read you a few words from the introduction to our report. They were put down only after long discussion with all the people concerned.

"The wastefulness, the unsanitary conditions and the risks due to the inadequate and intolerable housing conditions are generally recognized and understood.

"Likewise in many respects the equipment is obsolete and inadequate. Under the present conditions of housing and equipment, economy of operation is unattainable. In order to secure a proper understanding of any case, an examiner must be able to concentrate his attention without interruption for a sufficient time to thoroughly grasp it. In rooms containing several examiners almost every word spoken by one distracts the attention of the others. When an examiner has an interview with an attorney or applicant, the attention of the other examiners in the room is attracted and they either join the discussion or interrupt their work until the interview is over. The operation of a typewriter in a room with examiners is distracting."

That was only one little thing, but one common to business.

I do not know that it is a valid criticism, but I should like to question the method by which the Co-ordinating Service works. I gathered from Admiral Craven's paper that they work through committees. That involves an educational process which takes a long time. I doubt if it is the real way to operate. I am not, of course, acquainted with the staff with which Admiral Craven has to work, but I believe a set of standards

*President, W. H. Leffingwell, Inc., New York, N. Y.

such as we use in factory and office administration, against which the committees could measure every activity, would result in more progress and get ideas over more quickly than any other method.

I happen to be the president of the National Office Management Association, which is an offshoot of the Taylor Society because its original statement of purpose declared it to be an association for developing scientific management in offices. I should like, *ex officio*, to offer to Admiral Craven and President Hoover the services of this association in establishing standards for clerical operations, of which there are many thousands in government activities. I do not mean by that that we would go in and say how one particular stenographer should type a letter; we would set up standards for each different type of operation. Our membership is made up of the office managers of some of the largest organizations in the country and we should be glad to contribute whatever we have in establishing these standards and arriving at others in a scientific way. That is just a thought that occurred to me, but I am quite sure that I could persuade the Board to consider the proposition.

I feel also that the Taylor Society could be of assistance in the same way. We have in our membership specialists in a good many lines that correspond to government work. We could set standards that would serve as ideals for the various operators to work toward. There is no reason, for example, why the Patent Office should use ten people to open a thousand letters a day (a condition which we actually found) when in any ordinary office that is the work of a couple of clerks for a couple of hours.

The Senator rather doubts that there is the urge to do that sort of thing in governmental offices. I believe the urge can be instilled in the Taylor way; that is, by getting people to like their jobs. If we can get that idea to replace the idea of fitting a job, the problem of co-ordination will be made much simpler.

William P. Capes.¹⁰ The best I can do is to supplement Admiral Craven's paper by explaining the work of co-ordination the municipalities in the United States are doing on a state-wide basis.

Some thirty-odd states now have Leagues of Municipalities, and it is through these that the work of municipal co-ordination is being carried on. I can give you some idea of this work by

¹⁰Executive Secretary, New York State Conference of Mayors and Other Municipal Officials, Albany, N. Y.

sketching briefly the work that is being done in New York State. It is fairly typical of what is being done in the other states, although we are perhaps working a little more intensively and on a wider basis.

We have an organization of all the first-class villages and cities in the State with a population of over five thousand. This is known as the New York State Conference of Mayors and Other Municipal Officials. It has been in existence since 1910. One of the first things we found in need of co-ordination was the legislative work in the cities. The State Legislature needed to be informed of the desires of the cities. A committee of city officials has been carrying on that work since 1910. It keeps the Legislature informed of the opinions of the cities on the various proposals that are made to the Legislature. It also prepares for the villages and cities a legislative program which is adopted previous to the opening of the Legislature and which is presented to the Legislature and the Governor. In that way we have co-ordinated the legislative work of the cities and have procured splendid results. Of fifty-two bills opposed last year by the municipalities through this committee, not one passed the Legislature and became a law.

One of the next things we found in need of co-ordination was information. Before we established our Information Bureau every city was attempting to solve its own local problems as best it could. There were inefficient data and guessing as to the solution of various problems. Since 1916 the Conference has operated a New York State Bureau of Municipal Information whose job is to answer any question on municipal government that any municipal official asks. It cannot give advice or make recommendations. All it can do is to supply facts which are used by municipalities in solving their purely local problems. The scope of the work is indicated by the fact that we answer an average of 1800 to 2000 inquiries a year and send out about 9000 reports a year to municipalities of the State.

One of the next steps was the preparation and adoption of local ordinances and regulations. The Common Council would pass a resolution instructing its Corporation Counsel to prepare an ordinance to regulate the installation and operation of ammonia tanks. What does a lawyer know about ammonia tanks and where is he going to get his information? If the municipality is small there

may be no available technical advice. He may write to two or three cities that have such ordinances and as a result write an ordinance that does not fit the conditions. The first thing we did was to gather all the ordinances and make them available to all of the cities and villages in the State. We found this did not meet the situation and therefore finally developed a service of preparing model ordinances and regulations. We prepare at least five a year, with the hope of eventually building up a model municipal code and a model set of municipal rules and regulations. At the present time we have worked out sixty-five model ordinances and about ten model municipal codes.

As an example, in the last six months we prepared a model code of rules and regulations for Civil-Service Commissions in New York and within the last few weeks seven local Civil-Service Commissions have adopted those rules and regulations. We have also drawn up model building and housing codes.

Our next activity was the training of municipal officials. All the cities have been relying on experience to train municipal officials. We have developed the idea of providing municipal training schools. We now have in operation training schools for about sixteen groups of municipal officials. This will in effect constitute a municipal university offering training in twenty-two courses of municipal government to 12,000 municipal officials in New York State.

At about the same time we found there was need for co-ordination in the study of state-wide municipal problems. We have a program to study in the course of the next five years some sixty-odd municipal problems that have been suggested to us by a committee of experts. We aim to complete at least ten of these a year, and so far we have carried out our program. These are producing results.

As an illustration, we studied municipal fire insurance last year. We found that rates were exceedingly high. As a result the cities of the State petitioned the State Department of Insurance through the Mayors Conference for an investigation with the purpose of securing a special classification of municipal property and a lower rate. Three days before we filed our petition, but seven months after the results of our study were made

public, the insurance companies voluntarily reduced the rates on municipal property in New York. The reduction averaged 20 per cent, a saving of some \$320,000 a year on the item of fire insurance alone.

One of the plans we are starting this month to carry out has to do with purchasing. We found that the cities of New York were paying all kinds of prices for supplies for lack of proper planning and organization. The combined purchasing power of the cities and first-class villages is between \$150,000,000 and \$235,000,000 per year. If we can put into operation some plan which will save one per cent of that amount you can see what a tremendous saving in municipal taxes we are going to effect in the State.

We have established what we call an information service. On the first of each month we send a questionnaire to every first-class village and city in New York State. On that they report all the purchases they have made during the month. On the fifteenth of the month we compile that information and send it to all the first-class villages and cities. Yesterday we received the first three questionnaires. I compared them and found that of the three cities one had purchased gasoline at fifteen cents a gallon, another at six; one had purchased stove coal at \$14.25 a ton and another at \$11.20. That is the kind of information they will get and we think it will be helpful to them in working out their problems.

We hope as a result to show the necessity for a bureau to be operated through the Mayors Conference by the cities of the State to procure bids for supplies on scientific specifications and under a proper test. The municipalities would then be notified where they could buy the cheapest under the specifications. That has been experimented with in three or four cities and in one instance they reduced the cost of hose from \$1.20 per foot to twenty-five cents a foot.

That illustrates the kind of co-ordinating work we are doing and it can all be summed up in one clause on your program which says: "The abandonment of prejudice, guessing and haphazard imitation of methods, and the adoption of the open mind and scientific methods of research, experiment and analysis." That is what we are trying to do through the combined efforts of the cities of New York State.

Morris Llewellyn Cooke:¹¹ I helped Admiral Craven win the Spanish War and it is a satisfaction to me that the pleasant relationship has continued to this day.

There are two or three points that I should like to make. First, I do not want the idea that all politics are bad to go unchallenged in the proceedings of the Taylor Society.

This will not sit well with the engineers and management authorities, but politics is a lot nearer to the people than either engineering or management. We might just as well recognize that fact. It is life and the only way that the race has found of thrashing things out in a democratic way. Last night we were rather taken to task by an Austrian labor leader who was giving his reaction to the work of the Taylor Society. He said that while they admired our work on time study they laughed a little at the idea that an engineer could use a fatigue curve. While it may not be our function as members of the Taylor Society and management engineers to thrash out questions of public policy, it is well for us to put ourselves in a friendly and sympathetic relationship to that field of democracy.

Then I want to take exception to something which might be inferred from what our good friend King Hathaway said. You might gather from his remarks that it is only in governmental service that these terrible upsets occur; that only when a new governor, a new president or a new somebody else is elected that fine pieces of work are thrown out. He will agree with me that one of the finest pieces of management work that has been done in the world was done by Henry L. Gantt, Fred J. Miller, a past-president of the American Society of Mechanical Engineers, and a group of men at the Remington Typewriter Works at Ilion, New York. A change of management then occurred and one of the most brutal pieces of murder was immediately committed without the slightest regard for the work that had taken years to build up. That goes on in private industry and in government and it is something we have got to fight in both fields.

There are two things I have found helpful in my work in the field of public administration. One is a realization of the breadth of the field. Anyone who has been in the municipal, state or federal game realizes how limitless is the field in which he can work. Pick the thing that interests few people, for

example. Perhaps out of two such projects one may bring the Town Council, the State Legislature or the Congress down on your back. But the other, which may seem very similar, will attract no one's special interest and you can go ahead and do a very constructive job.

And whenever you can possibly do it work with the long-time plan in mind. The moment you go into something that must be finished in six months you are defeated before you start. The illicit politician is only interested in the next six months, or possibly four years. When you get beyond the period of their special interests and do your planning on a long-range basis you will find that things happen without anyone's getting excited and a good job is done without anyone's being aware of it.

Dr. William H. Allen:¹² I have thought of Admiral Craven's paper in relation to our New York City problems. I suppose it would not be possible to go into any city in the world where the message of co-ordination, the necessary motive and result of scientific management, is more needed. In spite of our enormous budget, our force of 140,000 people and our 1,200 to 1,500 agencies concerned with civic problems, we are without the concept of co-ordination.

I should like in the few minutes I have to appeal for the need of some kind of co-ordinated idea of what governments should deliver. Until we have that we are not going to have much co-ordination of motive or method in our public officials.

Admiral Craven has used two or three phrases: "Reconciliation of the details of the federal government in accordance with a master plan, plastic to executive judgment." He speaks of idle information and resources in departments, of the need for "habits of self-analysis" and for "teaching co-ordination in the home." New York City needs all of these things and needs them badly:

Today we had Judge Seabury appealing to the Supreme Court and the Court of Appeals with respect to a man named Doyle. We have had Mr. Doyle for three years in this town, six months of them during a state inquiry, but we have not yet co-ordinated the facts in the case and the real offense. The question now is whether the man is evading a requirement of the Court or is entitled to immunity for an answer he gave with respect to splitting fees. The town has completely forgotten *why* he was splitting fees. The

¹¹Consulting Engineer in Management, Philadelphia, Pa.

¹²Director, Institute for Public Service, New York, N. Y.

crime of Doyle was that he was able to ruin home district after home district, and business after business, with gasoline stations and garages under cover of the law.

Judge Seabury has also been looking into the Equitable Bus franchise of 1928. There is a bit of co-ordination there from which the public should be benefiting. The real sin in that case is that millions of people have been inconvenienced daily for more than three years for lack of promised action regarding buses.

The New York City Charter provides via the Comptroller for a co-ordinator in chief with far-reaching powers. He has the power to demand information from any person spending a cent of the city's money and yet he deliberately absented himself from the meeting where the Equitable franchise was being discussed. Instead of using his power to get information and give it to the public before the Mayor was able to jam the case through without a question, he left the public with absolutely no help from his fact-gathering and truth-telling machinery. Here was a situation "plastic to executive judgment" and yet the franchise was granted. That same executive judgment has recently jammed a budget through after making the Comptroller appear in a ridiculous light before the public. The public has not yet got it into its head that this fact-gathering, co-ordinating agency is a protection which never can be utilized if we follow Senator Mastick's advice about depending upon our executives. We do not have a Chinaman's chance to pick a man of the type Senator Mastick had in mind instead of a Mayor Walker.

We need to put men like Mr. Cooke to teaching not merely children but professional men some of the things that are not incorporated in our text books. With this distress on our hands we are still teaching the economics of world prosperity. After the World War 95 per cent of our histories and civics texts should have been scrapped. Instead the typical new edition of World History contains fifteen pages on "The World Since the World War."

I see no hope at all unless we get the concept of co-ordination into the homes, as Admiral Craven suggested. That means getting it into the schools, the teachers' training courses, the professional curricula.

If there is really to be co-ordination there must be a Taylor Society in every community, a group of individuals who, rain or shine, winter and summer, without regard to election, are trying to make it easier

for officials, business men and educators to do the co-ordinating on time.

This city is the center of world credit. Just last week we took the last steps in authorizing a budget which calls for the expenditure of \$698,000,000. It is called a tax budget of \$631,000,000 and actually requires, according to present estimates which are not correct, a tax of \$506,000,000. All our financiers are silent. Not one of them appeared before the Board of Estimate to point out what they know is provable that for every dollar we are taking out of private pockets for relief two or three dollars are being taken out of the public pocket in sheer waste. We have not co-ordinated to the extent of realizing that each year the \$100,000,000 of misplaced taxes manufactures more unemployment than any amount of private relief can assuage. And the State Tax Commission is our penalty for this inequitable assessing:

Dr. Gulick. Mr. Hathaway and Mr. Leffingwell have raised an issue on which I should like Admiral Craven to express an opinion. The industrial engineers have said that co-ordination is a part of the process of management and that any outside effort along that line is at best a makeshift, a second-rate adjustment. Do you think that the Co-ordinating Service of the government is a permanent, necessary service or only a temporary service which can be dispensed with when reorganization has been accomplished?

Admiral Craven. That is a difficult question to answer because it is very hard to tell what will happen in our government. Congress has never legislated the Co-ordinating Service into being. We have men from various bureaus and establishments on our many boards and through them we can best advise and influence. We cannot compel under the law. Congress gives the various departments definite rights and privileges. We cannot take them away. While appropriations are made as at present, a service similar to ours must remain in order to break down the walls of isolation not uncommonly created by individuals who are not always held personally responsible and accountable for waste and extravagance. In order to insure co-operation in the conduct of governmental business, a budgetary control together with a co-ordinating agency are essentials.

I have learned several things here today that

will be of service to me and am going to call on several of the gentlemen who have spoken for further advice and information. The service which I head in Washington is working primarily for the government, but it is also working for every one of you. The information collected and collated in my office is at your disposal; particularly in the management of cities and of municipalities in general it might be useful. Organizations for carrying on public business might find much of the information we have very helpful to them.

Notes and News of the Sections

An Historical Note

The archives of the Taylor Society have recently been enriched by the deposit of correspondence in 1909 between a writer of special articles and the editor of a prominent magazine. Note well the date—three years before the prominence given scientific management by the Eastern Rate Case Hearings.

From the letter of the writer of special articles:

"... you ask me to let you know if I run across anything else as valuable and interesting. . . . I have another matter in mind that has interested me for a number of years, which I believe can be made into a very readable and valuable article.

"There is a man named Fred W. Taylor, living in Philadelphia, who has developed and really formulated the science of shop management. . . .

"To my mind a science is any combination of phenomena which, when studied out, is reducible to exact or approximately exact laws. By a study of thirty years, and by practically applying his laws as fast as discovered, Mr. Taylor has reduced management to a science.

"Scientific management¹ . . . has been installed in a large number of shops, employing thousands of men who benefit by it, but it is so revolutionary that it requires a large mind to really grasp its significance.

"I have discussed it with dozens of shop managers running large institutions—men of attainments—who fail to grasp the fundamental idea, which is extremely simple.

"It is that there is one way that is best to do any given thing, from loading pig iron into a car to doing the most delicate and complex operation in industry. Scientific management requires that management shall

¹Editor's Note: This term was not adopted by Taylor and his associates until the fall of 1910.

know what this one best way is, and therefore requires that a detailed study shall be made of every operation until it is reduced to an art. Then the proper man to perform the operation in the best manner as disclosed by this study shall be scientifically picked and trained by scientific rules that are the formulated result of years of experience. As a result the work he turns out is from 100 to 400 per cent more in quantity—of better quality—at a lower cost, and with higher wages to him. Each man thereby automatically reaches the highest step on the industrial ladder which he is fairly capable of attaining. . . .

"Strikes are unknown under this system of management—in fact they are impossible, because the fundamental justice of rating men by a standard inevitably satisfies the workmen and eliminates all the causes of trouble that otherwise lead to strikes. . . .

"I have the data from which to write such an article . . . (which) has been confined to technical literature, practically machine-shop literature. Very little of it is known among other industries where the fundamental principles are just as applicable as in machine making.

"If you would care to have me undertake such an article, I will be very glad indeed of the opportunity."

Now note the editor's reply:

"... It is very hard to tell from a description of an article, whether or not the article will be available. If you had not sent us the interesting piece on ———, I would say that I hardly saw a subject in this man Taylor; but now I don't know. So the only thing that I can say is that if you will write it, we shall be very glad to see the article, and let you know immediately about it; also, if we cannot use it, we shall do our best to suggest the most likely medium in which to place it. . . ."

The writer did not feel encouraged and the article was never written.

The April 14 Meeting

The second of the Special Taylor Society Meetings was held on April 14, 1932, at five o'clock at the Hotel Lexington. Three propositions looking toward the avoidance of depressions through fiscal, monetary and credit control were put before the audience for discussion after dinner. Virgil Jordan, Economist with the McGraw-Hill Publishing Company, spoke on "Stabilization through Fiscal Policy"; William T. Foster, Economist, Cambridge, on "Stabilization through Money and Credit Policy" and Dr. Person

on "Stabilization through Regulation of Investment." Miss Eleanor Dulles, an expert on international finance, Paul Gourrich, of Kuhn, Loeb & Co., and David Cushman Coyle, a consulting engineer, opened the evening's discussion, which was widely participated in from the floor.

The papers and parts of the discussion will appear in a later issue of the BULLETIN.

University of California Student Branch

The officers of the University of California Branch of the Taylor Society for the academic year 1931-32 are Ellen Hawley, President; George Toll, Treasurer, and Vera Mae Slaughter, Secretary.

The open-forum type of meeting, preceded by dinner with the guest speaker of the evening, has been featured by the University of California Branch of the Taylor Society for the current academic year. Meeting jointly with the University of California Branch of the American Management Association at the Faculty Club, the members not only have the opportunity of hearing excellent speeches by prominent leaders of the San Francisco Bay region but may also discuss specific points with the speaker. The average attendance at the meetings has been about fifteen. Two formerly active members, Mr. H. J. MacFarland, Jr., and Mr. Carson Sheetz, both now residing in Sacramento, came down for the March meeting and returned the same evening to Sacramento—a record journey of which the Branch is quite proud.

A delightfully informative account of present-day Russian life as he had witnessed it during the summer of 1931 was the contribution of one of our honorary members, Dr. Felix Flügel, Associate Professor of Economics, to the first meeting of the year on September 1, 1931.

On October 12, 1931, Mr. R. P. Templeton, General Manager of the Pacific Manifold Book Company, of Emeryville, discussed practical problems in determining the site of an industrial plant.

Mr. Raynor Anderson, Industrial Engineer with the Oakland Chamber of Commerce, told the group which met on November 9, 1931, of the work which the Chamber of Commerce was doing in pointing out the advantages of the San Francisco Bay region for manufacturing enterprises.

Dr. Webster Robinson, Business Analyst and formerly Associate Professor of Business Administration in the College of Commerce of the University of California at Berkeley, addressed the February 8, 1932,

meeting on the topic, "Fundamentals of the Promotion of Industrial Enterprises."

"The Bedeaux System of Wage Payment" furnished the topic of a concise but clear account by E. G. Peter, of the Pacific Manifold Book Company, at the meeting of March 14, 1932.

New York Metropolitan

The New York Section departed from precedent on March 24 and discussed conditions in the Far East. Robert Bruere, a member from whom we are always glad to hear, has recently returned from an extended stay in Japan as Research Economist for the Laymen's Fact-Finding Commission of the Institute of Social and Religious Research. He was well equipped to shed light on the "Economic Implications of the Sino-Japanese Conflict," the topic of the evening, and gave a most human picture of the forces at work in Japan. His talk was ably supplemented by Thomas A. Bisson's scholarly exposition of the development of the Manchurian situation. In addition to his work as a member of the Research Staff on the Far East of the Foreign Policy Association, Mr. Bisson has spent considerable time in China.

Washington, D. C.

Taylor Society members in the neighborhood of Washington again met at the Brookings Institution for an informal luncheon on March 16, together with a group of economists and political scientists, to hear Mr. Hugo von Haan, of the International Management Institute in Geneva, on "The Evolution of Internationalism." Mr. von Haan's thorough grounding in the international aspects of scientific management brought out a crowd which exceeded the seating capacity.

Reviews

Organization Engineering. By Henry S. Dennison, McGraw-Hill Book Company, Inc., New York and London, 1931, pages viii, 204.

"Organization Engineering" is an excellent shot in the darkness before the dawn. Here is a fairly distinct field yet to be explored in which there are natural laws. When once these laws are known, we can do problems in any field of group relations. "As in electrical engineering we organize a field of electrical forces and resistances by arranging them into a structure of maximum usefulness, so in organization engineering we must seek to arrange a field of human forces and resistances . . . so that they interwork for maximum usefulness."

Mr. Dennison, however, does not put into this book any mouth-filling generalities of the kind you snatch down into a notebook. He seems impelled to avoid oversimplifications and gives us the experiences of a wise and rich industrial life over the field as a whole, and does it with clarity and beauty.

I wish he had risked oversimplifying. He says, "Its (organization's) success will exactly correspond to the extent to which this use (of men) results in their free, interested, and spontaneous activity." I wish he had gone on to say that this seems to imply the linking together of men so that by working toward common objectives each one advances his own objectives, various, vague and changing though they are. And I wish that he had explored the field in this or some other unifying manner. In the section on "Team Work" he does this, and it seems that all his findings could have been thus integrated.

Though there is risk in seeing one's field as a whole, if one can write his book around some such thesis, not only does one write more creatively, but more permanently, and one lays a foundation for further building in a material that few can handle better than Mr. Dennison.

FRANCIS GOODELL¹

Taming Our Machines. By Ralph E. Flanders. Richard R. Smith, Inc., New York, 1931, pages 244.

Thought usually follows action, we are told, and so for some time to come we will probably find an increasing number of literary attempts to bring into rational focus this complex question of man and his machines. In the case of this volume, however, the subtitle "The Attaining of Human Values in a Mechanized Society" comes much closer to describing the actual content.

One wonders why more books on human-value questions are not written by our engineers. If, as we are told, "workways make folk-ways," then the engineers have done more to influence our lives in recent times than any other group. But our engineers so seldom philosophize. Consequently, the same bifurcation which exists between action and thought in the person can also be said to exist in society at large. The engineers have been making society, they have been acting, while the philosophers have been talking about it. Presumably then until we can get engineers who can philosophize and philosophers who can act, the problem will remain as complicated as before.

Mr. Flanders takes machines for granted and thinks we might as well learn to get along with them. He surveys our past and shows how they came to be and then gives a summary of the present critical controversy about them. From this point he winds his way into the economics of the present "Welt-schmerz" and comes out concluding that from the national point of view anything as rigid as the Russian scheme would be very unsatisfactory for our American "individualism." His suggestions for improvement contain the well-known conception of planning and budgeting. He would set up some "authoritative body properly organized and adequately financed" to sift out the proposals offered; make a study of viewpoints, conduct researches, etc., to the end that some new modus operandi should be achieved, and all he adds in "terms of

enlightened self-interest." With the aid of machines we should go on searching for the good life undismayed by Spenglerian gloom. We may yet change the course of history—but, he insists, we must be "objective." "The richness of life is outside of us, not within us," he says. "It is vain to talk of the richness of an inner life and expect that such richness will increase through the centuries. The inner history is an oft-repeated and, in the end, dreary story. The richness comes in the material accretions of the generations." (p. 221)

If the last statement holds, then no doubt we should be a very happy people. Our "material accretions" are greater than ever and we should go on adding to this riches (he holds) without comprehension, for "comprehension is unnecessary and impossible." But undiluted extroversion has given the western world some nice little problems. Have we not had generations of pure action without concern for the "inner life"? More and more our perturbed peoples are asking "Quo vadimus?" Where are our machines taking us? It is not infrequently commented that unless we control them, they will control us. But that is a misconception of the question. Taming ourselves comes prior to taming our machines and we shan't tame them until we comprehend a little more deeply just what is their meaning to our daily lives.

JOHN J. HADER²

Concentration of Control in American Industry. By Harry W. Laidler, Ph.D., Thomas Y. Crowell Company, New York, 1931, pages xvi, 501.

As stated by the author in the Preface, the book is a descriptive, rather than an analytical or theoretical study of industrial trends. Dr. Laidler has brought together from numerous sources information bearing on the movement for consolidation and mergers in American industry.

While the author states that "the present volume makes no pretense at completeness," he has done a pretty thorough job in covering the field. Not only purely industrial mergers are described but natural resources, including oil, timber, metals, coal and water power; public utilities, including the telephone, telegraph and radio, the railroads, steamships; the "power trust" including gas, natural and artificial, electricity and water power; finance, marketing and even agriculture each have a chapter devoted to them, in addition to purely industrial chapters, which cover automobiles, food, tobacco, textiles, the equipment industries, publishing, chemicals and entertainment.

The final two chapters are devoted to a review of the law and court decisions interpreting the Sherman Anti-Trust Law and other legislative enactments followed by an interpretation of the trend.

The author's conclusions as to the trend toward greater concentration of control in industry can best be summarized by the following quotation:

It is, of course, true that the economies here enumerated are not in all cases effected; that the insiders in many consolidations have striven to secure such a large share of the "swag" for themselves that their ventures have turned out to be failures; that there is a point beyond which it is uneconomical to enlarge individual plants and that the growth of a corporation beyond a certain point may prove disastrous unless men of

¹Associate Secretary, Taylor Society, New York, N. Y.

²Rockaway, N. J.

large enough managerial capacity can be obtained and unless a proper sub-division of functions among the constituent members of the consolidation can be worked out.

It is true, as Samuel Crowther declares, that recent years have shown certain limitations to the so-called vertical trust formation and have demonstrated the economy of independent concerns in the production of special parts of automobiles and other goods. It is true that many at the head of the corporations have to decide questions of great importance connected with the subsidiaries at the bottom of the pyramid with little or no knowledge of the situation. It is true that, as an industry reaches the monopoly stage, there is no little danger of regimentation and stagnation, and it is true that a haphazard consolidation of a number of inefficient plants gives no guarantee that the resultant organization will be successful.

However, few can study the merger and trust movement of the last generation or more, few can observe the power of the drive back of the nation's financiers and industrialists toward further consolidation in an increasing number of industries and the weakening of any effective opposition to the merger movement, without a profound conviction that industrial concentration and trustification are likely to become ever greater in the years that are ahead.

The reader should be cautioned against some misleading statements with reference to investment trusts, which are probably due to the use of secondary sources of information. Otherwise the book presents a handy compendium of facts bearing on the most important phase of our industrial development.

N. I. STONE^a

Economic Rhythm. By Ernst Wagemann. Translated from the German by D. H. Blleloch, McGraw-Hill Book Company, Inc., New York, 1930, pages xvi, 287.

Traditionally exponents of the science of management have been concerned with the art of handling men and materials most effectively toward the attainment of given technical ends within the individual enterprise. That great progress has been made in this art is vividly revealed by the striking increase in per capita output of manufacturing labor in the United States—an increase of approximately 15 per cent between 1899 and 1914, of some 40 per cent between 1914 and 1929. These figures tell the story of technological improvement. Yet it is clear that neither business success nor social welfare may be measured unambiguously by such a gauge. In the year of grace 1930 the mortality of business concerns was greater than it had been for many years; the number of unemployed industrial workers ran into millions; the standard of living of millions of American workers declined sharply. These are developments, it is now clear, which enhanced internal efficiency in the conduct of business enterprises may avoid only partially, if at all. The fault lies elsewhere, in the larger relations among the elements of the economic system, in the factors which affect the processes of production, distribution and consumption in the economy at large. It is a fair question whether students of the science of management are not compelled, by force of circumstance, to take cognizance of the larger problems which are deposited at their doors by the tidal waves which periodically sweep through modern industrial economies. It is with such waves that the present book is concerned.

^aConsulting Management Engineer, New York, N. Y.

Dr. Ernst Wagemann attacks his problem with a unique combination of virtues, joining the objectivity of the academic scholar, the broad statistical knowledge acquired as president of the Imperial Statistical Office of Germany, and the lively appreciation of the practical aspects of economic rhythm which his position as director of the Institut für Konjunkturforschung has impressed upon him. His book represents an original and highly suggestive attack upon a problem which is perhaps old enough to have some of the characteristics of a classic in economic literature, and which is at the same time of the most immediate and pressing importance to the world today. The scope of his attack is ambitious, for Dr. Wagemann discusses the problems of diagnosis and business forecasting with reference to the whole interplay of forces which act within a dynamic economy. This attack is carried through with spirit and verve, and with more than a trace of exceptional controversial ability.

The forecasting technique employed by Dr. Wagemann is notably different from that which has received prominence in this country. A great variety of indicators is used and these are interpreted not in any mechanical manner but with the use of all the economic knowledge and practical judgment that may be brought to bear upon them. Wagemann feels that the great "plural-curve barometers," of which the Harvard indexes are perhaps the best known, have failed, and that the radically different technique which he has developed is definitely superior to such barometers.

Scientific management differs from rule-of-thumb management primarily with respect to the number of factors which are brought under administrative control. Such a book as this raises a question to which the engineering fraternity is already giving attention, and which is destined to receive fuller consideration in the years ahead of us. In the development of scientific control of industrial operations must the area of regulation be extended beyond the shop, beyond the individual enterprise, in order that the conjunctural elements arising out of inter-relations among establishments, among industries, among economic forces in the large may be brought within the sphere of conscious control? Whether this is possible only under a centralized economy such as that prevailing in Russia, or whether planning on a national scale is possible within the structure of capitalism and individualism remains to be determined. Wagemann's study, which suggests the possibility of control based on a fuller understanding of economic processes and on the ability to forecast major changes, represents one line of attack on this urgent problem.

FREDERICK C. MILLS^a

America's Way Out: A Program for Democracy. By Norman Thomas, The Macmillan Company, New York, 1931, pages ix, 324.

This book cannot be too heartily commended to all who want to know what American socialism today has to say

^aProfessor of Statistics, Columbia University, New York, N. Y.

about our economic ills and the way out. Mr. Thomas has the advantage of a liberal, cultural, non-economic training in approaching the historic, socialist dogmas; and as a result he bows to no imported or outmoded gods. His approach is contemporary, American, moderate, experimental, democratic. In consequence his book should stand, I believe, as the Bible of post-war American socialism for some time to come. One point out of many that he makes is interestingly relevant at the moment. He discusses economic planning in a fresh and statesmanlike way and is insistent that the whole idea of planning logically implies for any fulfillment a degree of social administration and control which is actually, even if not nominally, socialistic. Whatever may come of all the current patter on "planning," this thought deserves consideration. Those who think they can at once "plan" effectively and retain individualistic competition in finance, production and marketing are seemingly trying to have their cake and eat it too! At a moment when the assumptions on which our business institutions are based are being re-examined by honest realists, this book is an enlightening contribution. Everyone, especially those to whom the mention of the mere word "socialism" gives a heightened blood pressure, should read this book.

ORDWAY TEAD⁵

Rational Organisation and Industrial Relations. A Symposium of views from Management, Labour and the Social Sciences. Edited by M. L. Fledderus, International Industrial Relations Association, The Hague, 1930, pages 279.

Only a short time ago by the calendar, but an era ago by the march of events, Miss Mary van Kleeck closed this international discussion of current industrial affairs with these pregnant words, ". . . all is not as well with the United States as appears in the reports of travelers. . . ." During the same year, Professor Wesley Clair Mitchell sounded the same note in ending an American survey of "Recent Economic Changes": "Even on the face of affairs all is not well. . . ." In those halcyon days, however, such warning reminders from leading social scientists seemed to American business men, so joyously riding the inflationary whirlwind, merely the timid conservatism of the academic cloister. Indeed, it is doubtful whether even careful social scientists themselves realized how soon and how pervasively the golden nineteen-twenties would be swamped in the *Goldendammerung*. Only after the event can wisdom recognize itself.

To read now this report of the Conference of the International Industrial Relations Association is to realize the full force of this change. For in this "symposium on views of management, labour and the social sciences," there is much that is stimulating, important and pertinent to post- as to pre-depression days. But in those subtle matters of emphasis, omissions and underlying assumptions, it is definitely "dated."

Every subject considered during the six-day conference of this young association had its roots deep in modern industry.

⁵Editor of economic and business books, Harper & Brothers, and lecturer on personnel subjects, Columbia University.

When men and women from work-shop, office and research organizations pursue a well-integrated line of inquiry, light must be thrown on much that will always be important in the day-to-day conduct of industry. Proceeding from the general principle that modern industry has become a thing of group rather than individual function, the conferees ask first what constitutes the elements of rationally organized industry. They find the answer in scientific management and organization within the individual work-shops; rational organization of industries as combinations of work-shops designed to meet allied social requirements with a minimum of waste and effort; and co-operative industrial relations rooted in allegiance to methods of science and ends of human happiness. Here certainly are ideal goals for national economies everywhere to pursue. Matters of the job and its relationships, as well as personnel policy and procedure, the conference tied up also to science and human well-being. Labor's participation through trade unions, works councils and other organizations it accepted not only as an integral requirement for a rationally organized industry, but as a promise toward the double aim of efficiency and well-being. Finally, the affirmation of the extreme relevance of general economic policies to practical industry concluded the proceedings with an exhilarating, though temperate, glance to the future.

Certainly all this possesses a straight-line permanence that transcends the ups and downs of business fluctuations. Whatever our final disposal of the over-riding questions emerging from the depression; whatever the final outcome of crises in unplanned capitalism simultaneous with the planned economy of Russia's five-year industrial blue-prints; we shall need the continuing application of scientific method for the work-shop, for industrial relationships and for economies as a whole. For this F. W. Taylor pioneered; it is hardly necessary to remind readers of the Taylor BULLETIN how unfolding experience has emphasized the fundamental importance of his contribution. But as Beatrice Webb has aptly reminded us (I quote from memory) "Science can set only methods for achieving goals—not the goals themselves to be achieved." Suppose the United States before 1929 had brought everyone of its work-shops up to the level of its most scientifically organized units. Suppose it had drawn its industries into organizations that produced goods with a minimum of waste. It is very possible that all this might merely have accentuated our present crisis; that our banks would be groaning with still more funds, our granaries with still more wheat, our fields with still more cotton, our factories with still more idle machines, while millions face starvation and want.

To this the members of the IRI might easily reply that their definitions of rationalization included the goal of human happiness and production for social requirements. But how shall we attain such a production within the present framework of industry in an acquisitive society? Must we assume with capitalism that production for profit yields, better than any other controlling purpose, production for general human well-being; or with Russia that the profit motive cannot exist together with the use and service motive; or with Veblen that workers and engineers together will eventually have to establish the superiority of machine technique over business enterprise; or with Tawney that a functional society can have no place for the acquisitive instinct in industry?

The emergent pressure of such questions explains much of the current interest in Russia's five-year plan and in the general concept of economic planning for industry as a whole. Merely to transfer the notion of plan to a society rooted in individual property rights, however, is hardly logical thinking. We must ask what changes in prerogatives, vested interests and legal rights are necessary before a competitive, profit-motivated economy can become a socially planned one.

B. M. SELEKMAN*

Human Nature and Management. By Ordway Tead, McGraw-Hill Book Company, Inc., New York and London, 1929, pages x, 312.

In "Human Nature and Management," Mr. Tead has written a very practical and serviceable book for executives. In it he has told how to use psychology in its applied form in the every-day problems of managerial work. He has avoided controversial statements. Starting out with the idea of presenting the essentials of modern psychology, he has stuck closely throughout to the point of view that it implies toward the problems of human relations.

A primary essential in applying psychological principles in dealing with people is that the individual executive can learn how to deal with his own emotions and personal problems. This Mr. Tead has kept clearly in mind.

As I look back upon my own experiences in industry, I think of the great difficulties I had in getting over the psychological and psychiatric viewpoints in their applications to personnel work in management, and there is a deep feeling of regret that such a book as this could not have been on the market at that time—a time when there was either suspicion as to any possibility of practical application of psychology or a conviction as to the omniscience of psychological tests.

The contents of the book strike me as being so essentially usable in the every-day life of the average executive that it might not be amiss to present the chapter headings, as follows:

- I. Can Psychology Aid in Management?
- II. The Psychological Point of View
- III. The Inborn Tendencies to Action
- IV. The Use and Control of Emotions
- V. Forming and Changing Habits
- VI. The Learning Process
- VII. How to Encourage Reasoning
- VIII. The Meaning of Will and Personality
- IX. What Are the Defense Mechanisms?
- X. The Importance of Management's Purposes
- XI. The Integration of Conflicts of Purpose
- XII. The Technique of Creative Leadership
- XIII. The Creation of Morale
- XIV. The Technique of Group Action
- XV. The Psychology of Selection
- XVI. The Technique of Training
- XVII. Arousing Interest and Supplying Incentives
- XVIII. The New Discipline
- XIX. Industrial Democracy Psychologically Viewed

*Executive Director, Associated Jewish Philanthropies, Boston, Mass.

Mr. Tead has handled his material in a thoroughly scientific, sound and sane manner. From my own personal experience in the industrial field, I can urge upon every personnel man, every psychologist and psychiatrist in the field of human relations to attempt to sell this book to the executives he comes in contact with, for the education of operating executives is the fundamental job facing those who visualize the development of personnel work in industry to its proper level of usefulness.

V. V. ANDERSON, M.D.†

Foundations for Human Engineering. By Charles R. Gow, The Macmillan Company, New York, 1930, pages xiii, 226.

This book has a preface by F. Alexander Magoun, its editor, and a preliminary chapter by William Emery Nickerson "full of wise saws and modern instances," as he himself indicates.

The fourteen chapters by Mr. Gow, an engineer with wide experience in the contracting business, presents common sense advice to senior students in the Massachusetts Institute of Technology on handling the human element in business. These chapters were originally lectures and are presented as informally as the talks themselves must have been given.

There is much wisdom illustrated with first-hand case material. One might question whether the same time spent on applied psychology and psychiatry might not have brought more knowledge to the listening group as to why human beings behave as they do, but the concluding chapter, which covers the questions asked by the students and the answers given, seems to indicate that the lectures met a real need and aroused keen and stimulating interest.

LILLIAN M. GILBRETH‡

Unemployment Insurance in Great Britain. By Mary Barnett Gilson, Industrial Relations Counselors, Inc., New York, 1931, pages xiii, 560.

Miss Gilson's "Unemployment Insurance in Great Britain" is an unusually satisfactory book. It is an extended—almost an exhaustive—report on the background, nature, development and significance of the British experience in this field. From interviews with administrators of the law, examination of statistical data, perusal of reports of Royal Commissions and Parliamentary debates, and from contacts with experts she has gathered a remarkable body of fact and opinion. As a result, this book answers most of the questions that are ordinarily raised about Great Britain's unemployment insurance scheme and is a storehouse of information on many collateral issues.

The average American reader will learn with some surprise that the majority of insured workers have never received benefits because they have been too regularly employed to become eligible. "Between two-thirds and three-fourths of the insured population," says Miss Gilson, "have been but

†Director, The Anderson School, Staatsburg-on-Hudson, N. Y.

‡President and Treasurer, Gilbreth, Inc., Montclair, N. J.